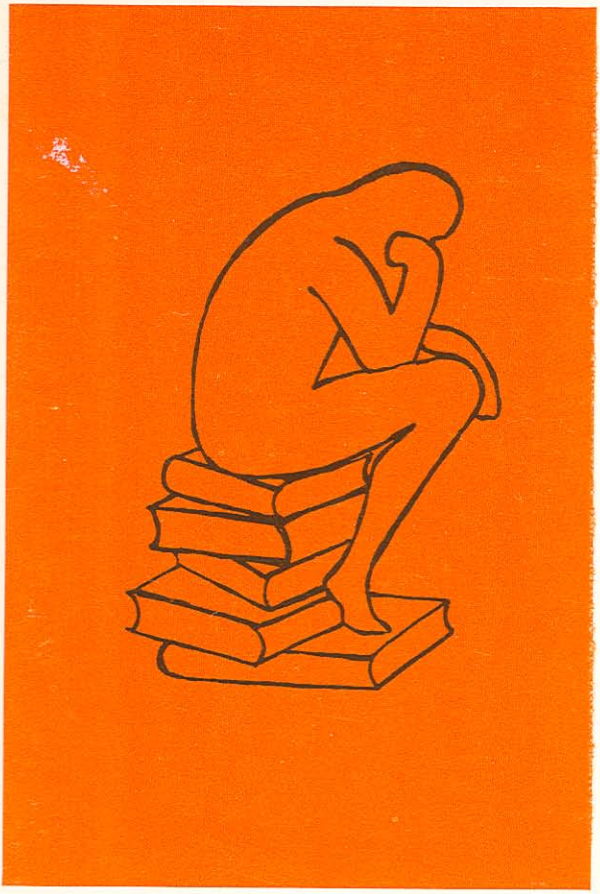

STOUT STATE UNIVERSITY

GRADUATE BULLETIN

1968 - 1970

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ACCREDITATION

The graduate program at Stout State University is fully accredited by the North Central Association of Colleges and Secondary Schools and the National Council for the Accreditation of Teacher Education.

Membership is maintained in The National Commission on Accrediting, The American Association of Colleges for Teacher Education, The American Council on Education, and the Midwest Conference on Graduate Study and Research.

Cover by Judy Moberg
Junior Art Student

STOUT STATE UNIVERSITY

GRADUATE COLLEGE BULLETIN

1968 - 1970

VOLUME LVI NUMBER 1

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GRADUATE COLLEGE ADMINISTRATION

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PAUL R. HOFFMAN, Ed.D. ..... Director, Vocational Rehabilitation

HISTORY

The heritage of Stout State University is linked to the career, foresight, and generosity of Senator James H. Stout, pioneer Menomonie lumberman. Senator Stout's respect for acquired skill prompted him to establish a program of manual training and domestic science in the Menomonie grade and high schools in 1891.

The program soon outgrew the facilities, however, and by 1893, new buildings were constructed and the Stout Manual Training and Domestic Science School, still a part of the public school system, remained under the patronage of Senator Stout.

Guided by President Lorenzo Dow Harvey, who was appointed in 1903, the school grew and in 1908 changed its name to The Stout Institute as an independent corporation. Three years later and one year after the death of Senator Stout, the institute was put under control of a board of trustees appointed by the state of Wisconsin.

With state support, the Stout Institute continued to progress in the pattern envisioned by its founder. In 1917, state legislative action made it a degree-granting college. Evolution continued under the leadership of President Harvey and Burton E. Nelson; in 1935, the Stout Institute was authorized to offer graduate study and to grant the master of science degree.

Dr. Verne C. Fryklund became president of the college in 1945. In 1955, the school became Stout State College and was placed under the jurisdiction of the Board of Regents of Wisconsin State Colleges. Dr. Fryklund guided the college through the period of burgeoning enrollment immediately after World War II and saw it well into a major building program before he passed the responsibility in 1961 to Dr. William J. Micheels, an alumnus of The Stout Institute, who became the college's fourth president. In 1964, the college became Stout State University. Building is continuing and prospects for enrollment show a rising curve, but the university remains remarkably true to the purposes Senator Stout espoused.

One of nine state universities, Stout overlooks scenic Lake Menomin in Menomonie, a pleasant city with a population of 9,000. Menomonie is located on Interstate 94, an hour by automobile from Minneapolis and St. Paul, and 30 minutes from Eau Claire.

Stout, now in its 75th year, continues to be the leader in its fields—home economics and industrial-technical education —and has strengthened its offerings in the liberal studies. The University's world-wide reputation has been established and is maintained by the success of its graduates.

LIBRARY, LABORATORIES AND OTHER FACILITIES

The Robert L. Pierce Library, now in a building program that will triple its size, has a book collection of over 86,200 volumes, a microfilm collection of more than 1,400 reels, and currently receives in excess of 1,070 periodical titles. The greatest strengths of the collection continue in the fields of Stout's historic specialization in home economics, industrial and vocational education. However, broadening curriculums have required a broadening library collection, numerically and in depth, to support new majors. University status puts important new demands on the collection, with the result that it is experiencing a period of unprecedented expansion.

LABORATORIES AND EQUIPMENT

The laboratories for the teaching of industrial subjects are well-equipped and modern. Ray Hall is devoted exclusively to laboratories containing complete equipment for elementary and advanced classes in building construction, wood technics, plastics, and industrial graphics. Bowman Hall contains labs equipped for work in graphic arts, power mechanics, and

audio-visual communication and photography as well as laboratories and lecture rooms for courses in the arts and sciences. Fryklund Hall, constructed in 1961, contains metalworking and auto mechanics labs, electronic laboratories, a general industrial arts lab, the music department, and classrooms.

The home economics laboratories in Harvey Hall are completely modern and well equipped. Laboratories used for home furnishings, child development, food science and nutrition, clothing and textiles, home economics education, and the sciences are housed in this building. Adequate lighting and modern furnishings and equipment allow effective instruction in pleasant and comfortable surroundings.

OTHER FACILITIES

The Memorial Student Center's informal atmosphere provides for the rich and enjoyable experiences of lectures and cultural events, social programs and informal gatherings. Included in the center are a snack bar, ballroom, offices, bookstore, meeting rooms and a recreation room which features the latest in bowling and recreational equipment.

Other facilities on the 75 acre campus include a new dining hall, resident halls for more than 2,500 students, athletic field, a new Health and Physical Education Center and the Harvey Hall auditorium. In the planning or construction stage are a Science and Technology building, Administration building, Child Study Center, and Maintenance building. Future plans call for new home economics and fine arts facilities.

THE GRADUATE COLLEGE

The Graduate College is organized to serve the student in reaching his chosen goal—earning a graduate degree or extending his education on the graduate level. It is a distinct administrative unit of Stout State University but is served by each of the four schools in the University—Applied Science and Technology, Education, Home Economics, and Liberal Studies. The Graduate College currently offers the master of science degree with a major in Audio-Visual Communications, Home Economics—Clothing and Textiles, Home Economics—Food Science and Nutrition, Home Economics Education, Guidance, Industrial Education, Vocational Education, and Vocational Rehabilitation.

ORGANIZATION

The organization of The Graduate College includes its administration, the graduate council, the committee structure—one for each major offered—and the graduate faculty. The

graduate council makes policy which is administered by the Dean and the staff. Each major is organized and operated by a director who is aided by a committee for the major. Courses are taught by the graduate faculty which is selected from the four schools.

RESPONSIBILITIES

Applications for admission are processed by the Director of Admissions of The Graduate College and passed to the director of the major in which the applicant desires to earn the graduate degree. Special students—not seeking to earn a degree—are served in The Graduate College office, without reference to a director of a major.

In general, the Dean of The Graduate College is responsible for all of the graduate program and hence approves admission, degree candidacy and programs, and graduation of all students. Petitions for exceptions to established policies must be approved by the Dean. The director of the major is, however, the key person in program planning for each student.

The graduate student seeking to earn a degree is counseled and advised as to the specific course work he might take and when to schedule it by the director of the major or a major adviser assigned by the director. The graduate student should work closely with the director of the major or the assigned major adviser not only as to the program but also in connection with fulfillment of the requirements. This is especially the case in regard to the research requirements.

FUNCTIONS

In keeping with Stout State University's general areas of concern. The Graduate College exists to serve three broad functions: education, service and research.

EDUCATION

The Graduate College offers programs for the preparation of master teachers, supervisors and administrators, and specialized support personnel in the areas of audio-visual communications, guidance, home economics—clothing and textiles, home economics—food science and nutrition, home economics education, industrial education, vocational education, and vocational rehabilitation. An emphasis in each program is the development of research competencies with attention to applied and action types of research. Continuing education beyond the bachelor's level for other than graduate degree purposes is a part of the college's function as well.

SERVICE

The service function of the graduate program provides staff consultants for area schools, state departments of education, and national organizations; provides investigations, surveys, and research reports; provides professional leadership for the promotion of the major fields offered in the graduate program. Types of educational contributions include sponsored workshop programs, publications in professional fields, consultant service, and participation as committee members and officers in local, state, and national organizations.

RESEARCH

Research and scholarship are educational activities of the graduate staff that are encouraged and promoted to provide leadership in the major fields offered in the graduate program. Many types of research projects related to teacher education problems, technological developments, curriculum development procedures, field surveys, and experimental projects are investigated by staff members and reported in professional literature and to professional organizations. The Graduate College offers consultative advice to faculty and students on research design and conduct.

ADMISSION PROCEDURES AND REQUIREMENTS

An individual desiring to earn a graduate degree, do work which could be transferred to another graduate school, or to extend his education at the graduate level must declare his intention before admission to The Graduate College. This requires an applicant to furnish certain information and complete various forms. In general, to be granted graduate student status the applicant must have a bachelor's degree from an accredited college. Depending on his goal, the status of an applicant is also determined by his cumulative grade point average and the nature of previous course work. Specific admission requirements are detailed in each major degree program in Part II. General admission procedures and forms include:

Admission form GC 111 — This form (included in this bulletin) must be completed by all applicants and returned to the Dean of The Graduate College at least 30 days prior to registration.

Transcripts — All degree program applicants, at the time of application, must submit an official transcript of under-

graduate and graduate work, if any, through their registrar to the Dean of The Graduate College.

Guest Matriculant form GC 113 — All students previously admitted to other graduate schools who wish to take graduate courses at Stout for transfer will be mailed this form upon request at the time of application. It is to be completed by their graduate school registrar at once and will be used in lieu of transcripts of previous work.

Registrar's form GC 114 — Applicants seeking graduate courses for certification, employer demands, or simply to extend their education must request this form from The Graduate College's admission office and have it completed by the registrar of their graduate or undergraduate college as evidence that a degree has been awarded.

Vocational Certification — An applicant seeking admission for degree work with a major in vocational education must have the state director of vocational education certify that the applicant is qualified for vocational or technical school teaching.

GRADUATE STUDENT STATUS

Full status is granted to applicants seeking a degree if they have at least a 2.75 grade point average (based on a four point system) and the undergraduate pattern of work required in the graduate major. Full status is also granted to applicants who had at least a 2.90 grade point average in the last two years of undergraduate work. Full status may be changed to probationary status if a student fails to maintain a 3.0 grade point average in his first term.

Probationary status is granted to applicants seeking a degree if they have an undergraduate grade point average less than 2.75 but not less than 2.25. A probationary student may be dropped if he fails to earn a 3.0 average in his first term. **Provisional status** is granted to applicants seeking a degree if they meet the grade point requirement for graduate work but fail to have the required pattern of work demanded by the graduate major. A provisional student may be required to make up undergraduate deficiencies and/or take additional graduate course work to earn a degree.

Special student status is granted to applicants who are not seeking a degree. Included in this group are graduate students from another college who are attending the Stout Graduate College for the purpose of transferring course work credits (guest matriculants), and students who desire only to upgrade their education and not obtain a degree.

Split programming grants graduate student status to an undergraduate who requires less than a full load to complete bachelor's degree work and who desires to take graduate work.

Such a student must have a 2.75 grade point average and a statement from the undergraduate major adviser that the applicant should complete his bachelor's degree work in that term. The total credit load of undergraduate and graduate course work is limited to 16 semester hours.

ACADEMIC INFORMATION

DEGREE CANDIDACY

A student entering The Graduate College with the stated intention of pursuing a given graduate degree at Stout State University works with an adviser to develop a program leading to the degree. Upon completion of at least nine semester hours of graduate credit in residence at Stout State University —including certain courses specified in each major—the student must apply for degree candidacy. A student may not enter upon his final six credits of work without being admitted to candidacy. Any student admitted to a degree program with credits from another institution should consult with the major adviser as to when he is eligible to apply for degree candidacy.

A qualifying examination, generally prior to or as part of degree candidacy, may be required of selected or of all graduate students. The examination is usually given near the end of the first term of the regular year or the second summer session in attendance. In either case, the nature and time of the examination are announced in advance. To be considered for candidacy, the following minimum requirements must be met; individual majors may have others.

1. Complete a block of courses specified for the major.
2. Hold a cumulative grade point average of at least 3.0 (B) in all Stout graduate courses completed to date.
3. Satisfactorily complete all required Graduate College examinations.

Candidacy is requested by the student, recommended by the major adviser and the director of the major and approved by the Dean of The Graduate College. A student may not enter upon his final six credits of work without being admitted to candidacy.

RESEARCH REQUIREMENTS

All majors require some kind of research as a culminating experience in the degree program. Two plants (A and B) are available and are described briefly below. Detailed instructions are available in the Graduate Office and further information

is given in the research courses. To be eligible for enrollment in either plans A or B, a stuednt must satisfactorily complete his degree candidacy.

Plan A—Thesis. This is to be a study in the major field involving original research on a significant problem. It is to be carried on using an approved research procedure and culminating in a thesis as the final report which is to be written according to accepted form. The student registers for 421-570 Thesis, for a total of six semester hours.

Plan B—Investigation. This is to be a study of lesser magnitude than the thesis and possibly confined to interpreting and drawing implications from the literature as it applies to the stated problem. The Plan B investigation is written in a form approved by the investigation adviser. Enrollment is in the appropriate problems course for two semester hours of credit.

GENERAL REQUIREMENTS FOR GRADUATION

The general graduation requirements for the master of science degree are as follows. More specific requirements for the major desired are given in the description of that program in Part II.

1. The pattern of work outlined for the degree must be completed. All programs require at least 30 semester hours of credit and at least 15 of those credits must be earned in residence on the Stout campus.
2. At least 15 semester hours in the master's degree program must be earned in courses open only to graduate students (500 series). The balance of the work may be selected from approved upper level undergraduate courses.
3. Requirements for the master's degree must be completed within a seven-year period. Courses completed prior to this time will not be counted towards graduation. This applies to transferred credit also. Requests for extension will be given consideration by the Graduate Council but will be granted only in unusual circumstances.
4. To earn a master's degree requires that the student spend at least two summer sessions or one semester on campus as a full-time student (minimum of 6 credits per summer or 11 credits per semester).
5. It is required that the candidate for the master's degree earn at last a "B" (3.0) average in all course work involved in his degree program.

GRADING SYSTEM

The Graduate College uses a seven step grading plan.

Grade	Grade Point Value	Description
A	4.0	Exceptional achievement at the graduate level
B+	3.5	Above average graduate level work
B	3.0	Average graduate level work
B—	2.5	Below average graduate level work
C	2.0	Acceptable graduate level work
D	1.0	Questionable graduate level work
F	0.0	Failure

An "incomplete" may be given in a course when a student fails to complete his work due to absence over which he has no control, providing his work has been acceptable during the period of his attendance in the course. Incompletes not cleared within a year after the course would normally have been completed will be changed to "W" (withdrawn); if the student desires credit after that time, he must re-enroll for the course. Incompletes may also be awarded for research not completed within the enrollment period. The same time limit and grading policy applies as with regular courses.

THE ACADEMIC CALENDAR

The university's academic year is divided into two semesters of 18 weeks each. Each semester is also divided into two nine week quarters. The student should recognize that the Stout designation of a quarter represents only one-half a semester and should not be confused with the quarter system in many universities which is 12 weeks in length. Courses scheduled on the quarter basis at Stout meet twice as often each week as courses scheduled on the semester basis.

SUMMER SESSION

Each year Stout State University offers twelve weeks of summer school. A two week pre-session begins immediately after the close of the regular academic year. This is followed by the regular eight-week summer session. A two-week post-session concludes the schedule. Thus, great variety is possible in summer programs.

Credit may be earned at the rate of one semester hour per week of attendance. This makes it possible to earn as many as twelve credits during a summer. Because of the large number of graduate students in attendance during the

summer, practically all graduate level courses are offered each summer. The Summer Session Bulletin is published each April. It contains complete information about offerings, class schedules, enrollment procedures, degree programs, and housing. A copy will be sent on request.

OPTIMUM LOAD

Usually, graduate students may take a maximum of 16 credits a semester. Students with half-time or laboratory assistantships are limited to a maximum of 11 credits a semester; quarter-time assistantships to a maximum of 14 credits a semester. During the summer session, the maximum credit load is an average of one semester credit a week.

TRANSFER CREDITS

The Graduate College will accept for transfer to a degree program up to eight semester credits of approved graduate work taken through the Stout State University extension service and/or from any accredited graduate school; or will accept up to a maximum of 15 semester credits of approved graduate work taken as on-campus residence credit at any of the Wisconsin tax supported universities. In any event, the total amount of transfer work to be counted toward the degree cannot exceed 15 semester credits and the work must be appropriate to the degree program.

Those students currently enrolled in a graduate degree program at Stout who desire to take work for transfer should obtain the approval of the major adviser and the Dean before enrolling for such work. Generally, official credit transfer is made upon completion of one-half of the degree requirements. All credit to be transferred must have been taken no more than five years previous to admission to the degree program at Stout. No credit toward a graduate degree will be allowed for correspondence work.

FEES

Graduate fees currently charged for the 1968-69 regular year and the 1969 summer session are:

	Regular Semester	Summer Session
Incidental Fee		
Resident (Wisconsin) full-time	$141.00	$ 72.00
Resident part-time, per credit	17.00	17.00
Non-resident, full-time	375.00	188.00
Non-resident, part-time, per credit	46.00	46.00

Student Activity Fee		
Full-time	21.00	5.00
Part-time, per credit (individually determined—see Dean of Men)		3.00
Student Center Fee		
Full time	14.00	6.50
Part-time, per credit ($5.00 maximum)	1.00	4.00
Special Fees		
Late Registration	10.00	10.00
Graduation Fee	7.50	7.50

Part-time graduate students are those carrying eight credits or less in the regular session or four credits or less in the summer session. Fees for the summer pre-session and post-session work are charged on a per-credit basis.

Split program students (eligible undergraduates carrying graduate work simultaneously) pay the applicable undergraduate fee. Any expenses incurred by the graduate during the conduct of research problems—such as the printing of questionnaires and maps, typing, thesis binding, etc.—is the responsibility of the student.

REFUNDS

Semester Basis

90% prior to eligibility to start classes
80% during first two weeks of class schedule
60% during third week of class schedule
40% during fourth week of class schedule
20% during fifth week of class schedule
0% after beginning of sixth week of class schedule

In determining withdrawal date, the university uses the date the student notifies the school of the withdrawal; or if the student fails to notify the school and is otherwise unable to verify date of withdrawal, the date of the request to refund should be used to determine the placement on the schedule.

Summer Session

90% prior to eligibility to start classes
75% during first week of class schedule
0% after first week of class schedule

Students who enter military service by enlistment, draft or otherwise, shall receive either a full refund of fees or receive course credits for the term. Other exceptions to the above may be made upon approval of the President and the designated Board office representative.

TEXTBOOKS

Graduate students must supply their own textbooks. These may be purchased in the book store located in the Memorial Student Center or elsewhere as chosen by the student.

HOUSING

Resident hall facilities are available for graduate students. It is recommended that graduate students seek accommodations in the south residence hall complex. The university will provide residence hall accommodations for approximately 3,000 students for the fall of 1970. Students living in residence halls are required to contract for their meals in the food service facilities as provided. The meal contract plan provides for 21 meals per week.

Rooms are available on the Sunday immediately preceding registration day in the fall. All rooms are assigned for the entire academic year. Each room is furnished with single beds and inner-spring mattresses, pillows, dresser, study table, chairs, study lamp, and book case. Sheets, pillow cases, drapes and bedspreads are supplied. Currently, the semester charges, if paid in advance, for room and board (21 meals per week) are as follows:

Double Room	Board	Total
$168.00	$222.00	$390.00

The current rate for a double room for the eight-week summer session is $64.00. Full payment for room and board is required at the time of registration. However, where a hardship would result from complete prepayment, special arrangements may be made to pay by the installment plan. Such a request must be approved by the Dean of Men or the Dean of Women. The schedule for payment by the installment plan for a double room is as follows:

Date Due	
First week of semester	$132.00
End of sixth week	132.00
End of twelfth week	132.00

A penalty of $5.00 is assessed for all late payments, whether by semester or by installment. A $50.00 room deposit is required on all room reservations at the beginning of the term. Students cancelling admission to the University prior to July 15 of the fall term and January 1 for the spring term shall be refunded in full. After those dates the deposit is forfeited. The $50.00 deposit is refundable, subject to reduction for residence hall damage claims. It may be used as part of the full term advance payment or applied to the last installment to be paid.

Students are requested not to bring additional furniture, particularly floor lamps. Radios are permitted in the rooms provided the students comply with the regulations for radios. Television sets are available for general use in the main lounge of each building. If a student vacates his room in the residence hall prior to the end of the period of his contract, his money will be partially refunded according to the policy.

At the present time, Stout State University has approximately 66 married student apartments. These are barracks-type units with two bedrooms, a bath, a kitchen alcove, a living room and limited storage space. These units may be rented furnished or unfurnished. Married student facilities are also available in the community of Menomonie. Married students are encouraged to obtain housing on their own in addition to seeking the assistance of the university. Inquiries for student housing should be directed to the Director of Student Housing.

FINANCIAL AIDS

Several kinds of financial aids are available to graduate students who fully meet all entrance requirements. Some of these aids are designed to provide professional experience as well. Application for assistantships should be filed with the Dean of The Graduate College by March 15 preceding the academic year of planned attendance. Other inquiries for financial assistance should be made to the Director of Financial Aids. Conditions for assistantships and other aids are subject to change.

GRADUATE ASSISTANTSHIPS — HALF-TIME

The half-time graduate assistantship requires twenty hours of professional service per week in an area related to the student's major. The student may not accept other employment during this period. A stipend of $2,500 per academic year is provided. The non-resident graduate assistant, in addition, pays only the resident incidental fee, the non-resident portion being waived. The student's scholastic load is limited to a maximum of eleven credits per semester. This demands attendance during the summer session preceding and/or following the regular year of such service to earn the master's degree.

GRADUATE ASSISTANTSHIPS—QUARTER-TIME

The quarter-time graduate assistantship requires ten hours of professional service per week in an area related to the student's major. A stipend of $1,250 per academic year is provided. The quarter-time graduate assistant pays all fees. The student's scholastic load is limited to a maximum of fourteen credits per semester.

LABORATORY ASSISTANT

The laboratory assistant teaches a laboratory subject, generally about ten contact hours per week. A stipend of $2,500 per academic year is provided. The non-resident laboratory assistant, in addition, pays only the resident incidental fee, the non-resident portion being waived. The student's scholastic load is restricted to eleven credits per semester. This demands attendance for a summer session preceding and/or following the regular year of such service to earn the master's degree.

GRADUATE SCHOLARSHIPS

These scholarships provide for a grant of $340.00 (currently) for the academic year. No demand is made of the student for service to the university nor is the scholastic load restricted in any way. This award may go to holders of assistantships. Only Wisconsin residents are eligible.

RESIDENCE HALL COUNSELORSHIPS

Opportunity is available to a graduate student to serve as a residence hall counselor. The monetary benefit of this offsets the cost of room and board. Application for such service should be made to the Director of Student Housing.

WISCONSIN STATE STUDENT LOAN FUND

A loan is available from the Wisconsin State Student Loan Fund for those students who are residents of Wisconsin and are in need of loan assistance. The maximum amount of such loans is limited to $1,000 for an academic year and $250 for the summer session. There is no interest charged while the borrower is in attendance at Stout. Interest at a 3 percent rate is charged beginning nine months after the borrower terminates his attendance at Stout.

NATIONAL DEFENSE STUDENT LOANS

The National Defense Student Loan program is available to graduate students in need. The borrower must show that he can maintain a B average (3.0 grade point average) scholastically. The amount of the loan is determined by the availability of funds and the need of the student. Repayment of the loan is to be complete within a ten year period, which begins nine months after the borrower leaves Stout as a student. Interest at 3 percent per annum accrues at the time the repayment schedule begins. The obligation is cancelled in case of death or permanent or total disability of the borrower. Up to 50 percent of the loan may be cancelled (at a rate of 10 percent of the loan per year for 5 years) if the borrower becomes a full-time teacher in a non-profit elementary, secondary, or vocational school, or higher education institution.

SPECIAL SERVICES

EXTENSION PROGRAM

The university offers a program of evening and Saturday morning extension classes. Credits earned through enrollment in these off-campus courses are considered as extension credits. They are transferable to Stout State University on the same basis as they are to other colleges and universities. Registration for these courses is completed at the first class meeting by the University Extended Services Director or by the instructor. Textbooks required for the class by the instructor are made available for purchase at the first class meeting.

Course numbers, titles and content are the same as those offered on the university campus. Some courses numbered 400-499 may be awarded graduate credit. Courses numbered 500-599 are open only to graduate students. To be awarded graduate credit for extension work requires that the student be admitted to The Graduate College.

FIELD EXPERIENCE PROGRAM

In certain majors, students are encouraged to obtain part of their college education off campus through the Field Experience Program. This program allows a student to receive academic credit for off-campus experiences and study related to his major while employed in an approved field position. This work experience and study is then coordinated with classroom studies by means of group seminars, written reports, supervisor's evaluation and field visitations by faculty mem-

bers. Further information may be obtained from the Director of the Field Experience Program.

PIGEON LAKE FIELD STATION

The Wisconsin State Universities sponsor a summer program at Pigeon Lake Field Station near Drummond, Bayfield County, in northwestern Wisconsin. Appropriate course work successfully completed in the various camp programs by students enrolled in the system is credited as residence study by their respective universities.

The field station has been leased from the U. S. Forest Service since 1959 and functions as a natural laboratory in the heart of the Chequamegon National Forest. Sixteen rustic cabins are available, each with a capacity of six to eight students. A dining hall, recreation hall and two classroom -laboratory buildings are situated near 1400 feet of shoreline. Excellent facilities are available for boating, swimming and fishing.

UNIVERSITY COUNSELING CENTER

The University's Counseling Center, located in Room 16 of Harvey Hall, is maintained to help undergraduate and graduate students obtain the maximum benefit from their university careers and to develop to the full limit of their potential. The services of the Counseling Center include vocational guidance, career information, assistance with academic problems and study habits, specialized testing, and personal counseling. Students who seek assistance are given the opportunity to work with a counselor in a confidential relationship in which they can explore their aspirations, interests, aptitudes, abilities, personal characteristics, and increase self-understanding.

Counseling is normally provided through appointment; an appointment is not necessary for the student who feels the need for immediate assistance. There is no charge for the counseling services.

Graduate students who are in doubt about their vocational future, who are experiencing academic difficulties, or who are concerned about personal problems are especially invited to contact the Counseling Center.

HEALTH SERVICE

The University maintains a student health service with a nurse in attendance and medical services at a local clinic. This service is limited to "first aid". The student is responsible for his medical care beyond the incidental limited service provided in the nurse's office.

RECREATION

Athletic and social facilities are an important part of the campus. The university provides its students with a rich and well rounded college experience so that as they develop academic and professional competence, they also gain experience and insight into many different activities and relationships.

Athletic facilities include the Health and Physical Education Center and Nelson Field. The Center offers open recreation, intramural athletics and physical education instructional classes. The building provides courts for tennis, badminton, volleyball, basketball and archery as well as individual rooms for weight training, gymnastics and dance. A swimming pool is also located in this area. The total area is open for co-educational recreation during the regular year on Friday from 6:30 to 10:00 p.m.; Saturday from 1:00 to 5:00 p.m. and 6:30 to 10:00 p.m.; and Sunday from 2:00 to 5:00 p.m.

Lake Menomin, within the city, offers the finest in fishing, swimming, boating, canoeing and water skiing. Similar opportunities are available on the nearby lakes. Ski enthusiasts will find excellent opportunities within commuting distance. Game hunting (bird and deer) opportunities are to be found in the immediate vicinity. The Menomonie Country Club has a nine hole golf course.

MILITARY OBLIGATIONS

Men registered with the Selective Service System must keep their local boards informed of their student status if they wish to request a student deferment. The Registrar's Office provides the following services: Makes available to students applications for student deferments; keeps students informed with policies of the Selective Service System; provides Selective Service Boards with up-to-date information to assist students in obtaining a deferment.

Menomonie maintains a unit of the Wisconsin National Guard. Many students attending Stout belong to this unit. It is possible for a man who joins a national guard unit and who then attends that unit's weekly drills to be exempt from the selective service. A student who belongs to another guard unit within Wisconsin can continue his drill in Menomonie and still maintain the military status which he had while at home. Persons in national guard units in other states can make somewhat similar arrangements.

VETERANS SERVICE

Special assistance is given veterans by the Registrar. This office provides veterans with current information on veterans affairs and maintains liaison with the Veterans Administra-

tion, Department of Veterans Affairs, and the County Veterans Service Officers.

PLACEMENT

Registration for placement is a requirement for graduation. Essentially, this involves completing various placement forms and securing references from a specified number of persons.

The placement office is maintained to provide service to seniors, graduate students, and alumni. The goal of the placement office is to give effective support to the placement efforts each individual is expected to make in securing the position best for him. Every effort is made to bring to the attention of candidates for placement, information about vacancies, trends in supply and demand, data about salaries and conditions of employment, and to recommend effective application techniques.

Alumni are advised to keep their placement credentials updated and to make free use of the service available to them when they desire to relocate. A form for registering for placement may be secured by writing to the Director of Placement. Other graduate students are invited to establish a placement file and to make use of placement services when they are within one semester of meeting the requirements for graduation.

PARKING

Motor vehicles may be brought on campus by students if there is a real need. Parking facilities on or near the campus are limited. Students who expect to use University-owned or controlled parking lots must register their vehicles and observe the regulations issued by the Security Office. Limited parking adjacent to the residence halls is available to those living in them. The City of Menomonie has restricted parking ordinances which limit street parking both day and night.

THE FINANCIAL AIDS PROGRAM

Financial aids under the supervision of the Director of Financial Aids, include loans created by the N.D.E.A. and by the State of Wisconsin. To qualify for the former, a student must be accepted or enrolled in The Graduate College and be in need of financial assistance. The maximum loan for each year is $1,000. The amount of the loan is determined by the availability of funds and the student's financial need. Applicants are invited to contact the Director of Financial Aids for further information.

Robert L. Pierce Memorial Library

PART II

MAJORS OFFERED AND REQUIREMENTS

AUDIO-VISUAL COMMUNICATIONS

This curriculum leading to a master of science degree with a major in Audio-Visual Communications is designed to increase the personal and professional development of the student in the field of instructional communications. It is so planned that the graduate is qualified to prepare and use educational media and to develop, supervise, and administer audio-visual service for all levels of education and/or industry and government.

ADMISSION REQUIREMENTS

To be admitted on full status to the major in Audio-Visual Communications, the applicant must have a bachelor's degree awarded by an accredited college with at least a 2.75 undergraduate grade point average based on a system of A=4, B=3, C=2, D=1, F=0.

In addition, the applicant planning on service in the elementary or secondary schools, should have valid teacher certification or sufficient credits to qualify for such certification. (Those who do not plan on entering elementary or secondary school audio-visual communications service may have this waived.)

Further, applicants planning on elementary or secondary school service should be cognizant of the fact that successful teaching experience is a requirement for certification in this field in some states.

A deficiency in these admission requirements does not preclude admission, but it may require taking undergraduate work and/or increase the amount of graduate course work required to earn the degree.

CERTIFICATION REQUIREMENTS

Students planning employment in Wisconsin should make certain they meet the State Department of Public Instruction's certification standards for Audio-Visual Director-Media Specialist and Audio-Visual Coordinator-Media Specialist as outlined in the Wisconsin Administrative Code. Those planning service elsewhere might well investigate the standards to be met.

GRADUATION REQUIREMENTS

To be awarded the master of science degree with a major in Audio-Visual Communication, the student must earn not less than 30 semester credits with an average grade of B or better, 15 credits of which shall be in 500 level (graduate only) course work. All students must complete the basic required and major restricted elective course work listed below and sufficient restricted elective course work, in consultation with the major adviser, to fullfill the minimum of 30 semester credits required for earning the degree.

BASIC REQUIRED COURSE WORK: 8 or 12 semester credits

		Semester Credits
421–501	Research Procedures	2
421–510	Applied Research	2
421–561	Education Statistics — and either —	2
421–570	Thesis (Plan A) —or—	6
407–522	Problems in Audio-Visual Communication (Plan B)	2

MAJOR RESTRICTED ELECTIVE COURSE WORK: Minimum of 14 to a maximum of 20 semester credits selected, in consultation with the major adviser, from this list.

107–405	Advanced Photography	2
107–445	Color Photography	2
107–540	Advanced Technical Problems: Audio-Visual	2–6
137–543	Advanced Technical Problems: Graphic Arts	2
354–541	Digital Computer Programming	2
391–470	Television Programming and Performance	3
407–360	Audio-Visual Education*	2
407–435	Film: History Appreciation	3
407–436	Fundamentals of Motion Picture Production	2
407–439	Advanced Motion Picture Production	2
407–493	Television Production Techniques*	3
407–494	Instructional Communications Systems*	2
407–532	Planning Closed Circuit Television Systems	2
407–547	Communications Media Design*	2
407–551	Programmed Instruction*	2
407–559	Seminar in Educational Media	2
407–560	Audio-Visual Administration*	2

RESTRICTED ELECTIVE COURSE WORK: In sufficient number to total the minimum of 30 semester credits.

421–481	American Higher Education	2
421–500	Philosophy of Modern Education	2
421–502	Principles of Supervision*	2
421–526	Administration*	2
421–538	Elementary School Curriculum*	2
421–539	High School Curriculum*	2
479–555	Advanced Psychology of Learning	2

Substitutions in the course work listed may be approved by the Dean of The Graduate College through petition by the student with the recommendation of the major adviser.

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*Courses recommended for Audio-Visual Director Certification in certain states.

GUIDANCE

This program leading to a master of science degree with a major in Guidance provides a basic preparation and a number of concentrations leading to the development of the student for employment as: Elementary School Counselor; Employment Counselor; Psychologist-Provisional; Psychologist-I; Secondary School Counselor; and Technical and Vocational School Counselor.

ADMISSION REQUIREMENTS

To be admitted on full status to the major in Guidance and Counselor Education, the applicant must have a bachelor's degree awarded by an accredited college with at least a 2.75 undergraduate grade point average based on a system of A=4, B=3, C=2, D=1, and F=0.

In addition, the applicant should have a sincere interest in social service and the ability to develop a helping relationship with others. Students seeking positions as elementary, secondary, or vocational school counselors in the State of Wisconsin must meet certain experience requirements in addition. These requirements are outlined by the State Department of Public Instruction (elementary and secondary counselors) or the State Board of Vocational, Technical and Adult Education (vocational school counselors).

More specifically, depending on the area of specialization, the applicant should have the following background: for Elementary School Counselor—Child Psychology and preferably elementary school certification and experience; for Secondary School Counselor—Adolescent Psychology and preferably secondary school certification and teaching experience; for School Psychologist—Adolescent Psychology, Child Psychology, and Abnormal Psychology; and for Technical-Vocational School Counselor, preferably technical-vocational certification. The other specializations do not demand specific course work or certification.

A deficiency in these admission requirements does not preclude admission; but, it may require taking undergraduate work and/or increase the amount of graduate course work required to earn the degree.

GRADUATION REQUIREMENTS

To be awarded the master of science degree with a major in Guidance and Counseling, the student must earn not less than 30 semester credits with an average of B or better, 15 credits of which shall be in 500 level (graduate only) course work. All students in this major must complete the basic major required courses and such other elective course work listed for the concentration selected. (See each specialization for additional requirements).

BASIC REQUIRED COURSE WORK: 8 to 12 semester credits

421–501	Research Procedures	2
421–510	Applied Research	2
421–561	Educational Statistics — and either —	2
421–570	Thesis (Plan A) — or —	6
421–531	Problems in Guidance (Plan B)	2

MAJOR REQUIRED (CORE) COURSE WORK: 20 semester credits, certain courses subject to substitution upon consultation with the major adviser to meet concentration selected.

421–401	Introduction to Guidance and Counseling	2
421–552	Group Guidance Procedures	2
421–565	Organization and Administration of Guidance	2
479–475	Counseling Theory	2
479–490	Aptitude and Achievement Appraisal	2
479–491	Psychology of Careers	2
479–513	Personality Theory	2

479–541	Individual Mental Testing	2
479–590	Supervised Clinical Practicum	4

CONCENTRATION REQUIRED COURSE WORK: In addition, according to the concentration (goal) desired, the student must complete the specified course work listed for it. In no case will the total graduate course work be less than 30 credits. Some concentrations require more than 30 credits.

ELEMENTARY SCHOOL COUNSELOR (30 credits)

421–429	Guidance in the Elementary School*	2
421–538	Elementary School Curriculum	2
479–548	Diagnosis and Remediation of Learning Difficulties**	2

*May substitute for 421-401 — Introduction to Guidance
**May substitute for 479-491 — Psychology of Careers

SECONDARY SCHOOL COUNSELOR (30 credits)

421–539	High School Curriculum	2

EMPLOYMENT COUNSELOR (30 credits)

303–420	Introduction to Cultural Anthropology	3
387–411	Problems of American Society	2
387–440	Sociology of Work	3
387–460	Juvenile Delinquency	3
387–475	Sociology of Minority Groups	3
387–490	Sociological Theory	3
479–430	Industrial Psychology	2
479–550	Appraising the Individual*	2
479–590	Supervised Clinical Practicum**	2

*Required, may substitute for 479–541 — Individual Mental Testing
**Required, reduces core requirement to 2 credits

TECHNICAL-VOCATIONAL SCHOOL COUNSELOR (34 credits)

421–500	Philosophy of Modern Education	2
469–402	Principles of Vocational and Adult Education*	2
469–415	Technical Education Programs**	2
469–492	Administration of Vocational and Adult Education Programs***	2
479–534	Technical-Vocational School Student	2

*Substitute for 421–401 — Introduction to Guidance; waived if in undergraduate record.
**Waived if in undergraduate record.
***Substitute for 421–565 — Organization and Administration of Guidance; waived if in undergraduate record.

SCHOOL PSYCHOLOGIST—PROVISIONAL (38 credits)

Those desiring School Psychologist—Provisional certification must complete the course work listed below.

421–538	Elementary School Curriculum*	2
421–539	High School Curriculum*	2
479–432	Psychology of the Exceptional Child	2
479–543	Advanced Individual Mental Testing	2
479–545	Assessment of Personality (Projectives)	2
479–548	Diagnosis and Remediation of Learning Difficulties	2
479–555	Advanced Psychology of Learning	2

*Either one; both not required

SCHOOL PSYCHOLOGIST I (51 credits)

Those desiring School Psychologist I certification must fulfill, in addition to the course work listed for the Provisional Certificate listed above, the following:

303–420	Introduction to Cultural Anthropology	3
421–500	Philosophy of Modern Education	2
421–505	Social Thought of American Educators	2
479–550	Appraising the Individual	2
479–595	Clinical Practice in Educational Diagnosis	2

Substitutions in the course work listed may be approved by the Dean of The Graduate College through petition by the student with the recommendation of the major adviser.

HOME ECONOMICS - CLOTHING AND TEXTILES

This program leading to a master of science degree with a concentration in Clothing and Textiles in the Home Economics major provides opportunity for concentrated development in the areas concerned. In consultation with the major adviser, an individualized program to meet the interests, educational background, experience, and professional goals of the student can be planned.

A program of study with an emphasis in the clothing area will include supporting work in textiles, art, psychology, sociology, or economics. A program with an emphasis in the textile area will include supporting work in chemistry, economics, or clothing. Programs for students planning college teaching will include courses in professional education.

ADMISSION REQUIREMENTS

To be admitted on full status to the major in Home Economics with a concentration in Clothing and Textiles the applicant must have a bachelor's degree from an accredited college with at least a 2.75 undergraduate grade point average based on a system of A=4, B=3, C=2, D=1, and F=0.

In addition, the applicant should have an undergraduate preparation of about 20 semester credits in the area of concentration, however, a general or specialized major in Home Economics is acceptable.

A deficiency in these admission requirements does not preclude admission but it may require taking undergraduate work and/or increase the amount of graduate course work required to earn the degree.

GRADUATION REQUIREMENTS

To be awarded the master of science degree with a concentration in Clothing and Textiles in the Home Economics major the student must earn not less than 30 credits with an average grade of B or better, one-half of which shall be in 500 level (graduate only) courses. A minimum of 12 semester credits of course work is required to be taken in the field of concentration, and not less than 6 semester credits in the supporting field.

BASIC REQUIRED COURSE WORK: 8 or 12 semester credits

		Semester Credits
421–501	Research Procedures	2
421–510	Applied Research	2
421–561	Educational Statistics —and either—	2
421–570	Thesis (Plan A) —or—	6
214–551	Problems in Clothing and Textiles (Plan B)	2

REQUIRED COURSE WORK

Select in consultation with the major adviser a minimum of 12 to 14 credits from either the clothing or the textiles area, plus a minimum of 6 to 8 credits in the chosen supporting field.

A student planning on college teaching shall select, in consultation with the major adviser, a minimum of 14 to 18 credits from both the clothing and textiles lists, plus a minimum of 4 credits in education.

CLOTHING COURSES

214–412	Draping	3
214–450	Tailoring	3
214–465	European Study Tour	3–6
214–471	History of Costume: Ancient to European	3
214–475	History of American Costume	2
214–480	Social and Psychological Aspects of Clothing	2
214–498	National Study Tour of Fashion Industry	1
214–499	Independent Study (Clothing)	1–6
214–514	Seminar in Clothing and Textiles	2
214–517	Advanced Apparel Design	3
214–544	Workshop in Clothing and Textiles	2

TEXTILES COURSES

214–411	Decorative Fabrics	2
214–465	European Study Tour	3–6
214–499	Independent Study (Textiles)	1–6
214–514	Seminar in Clothing and Textiles	2
214–544	Workshop in Clothing and Textiles	2
214–572	Advanced Textiles	3

Note: See major adviser about anticipated courses to be added to this area.

Substitutions in the course work listed may be approved by the Dean of The Graduate College through petition by the student with the recommendation of the major adviser.

RESTRICTED ELECTIVE SUPPORTING WORK

Sufficient courses in the supporting area are to be selected in consultation with the major adviser based on the following:

For those desiring an emphasis on clothing, the supporting work will include courses in Art, Psychology, Sociology, and Economics.

For those desiring an emphasis on textiles, the supporting work will include courses in Chemistry and Economics.

In special cases, the student may develop a program plan which will enable her to take course work from the lesser emphasis as the supporting work.

HOME ECONOMICS - FOOD SCIENCE AND NUTRITION

The program leading to a master of science degree with a concentration in Food Science and Nutrition is designed to increase the knowledge and competency of the student in these areas. Specialization in Food Science and Nutrition prepares the student for advanced positions in teaching, dietetics, a wide range of positions in business and industry, and for further advanced food and nutrition related study.

ADMISSION REQUIREMENTS

To be admitted to the graduate Food Science and Nutrition program with full status, the applicant must have: (1) a bachelor's degree in Home Economics or a substantial background in the chosen concentration; and (2) a grade point average of 2.75 based on the system of A=4, B=3, C=2, D=1, and F=0. Deficiencies in the recommended background will increase the required course work for the degree.

GRADUATION REQUIREMENTS

The student concentrating in Food Science and Nutrition must earn at least 30 semester credits with an average grade of B or better. Each student must complete both basic and concentration required course work and sufficient electives to fulfill the 30 or more credit hours stipulated.

BASIC REQUIRED COURSE WORK: 8 or 12 semester credits

		Semester Credits
421–501	Research Procedures	2
421–510	Applied Research	2
421–561	Educational Statistics — and either —	2
421–570	Thesis (Plan A) — or —	6
229–547	Problems in Food Science and Nutrition (Plan B)	2

CONCENTRATION REQUIRED COURSE WORK: 15 semester credits.

At least 12 of the 15 semester credits earned in the Food Science and Nutrition concentration must be in 500 level (graduate only) courses. A minimum of 5 of the 15 semester credits must be earned in the student's emphasis of lesser interest.

FOOD SCIENCE EMPHASIS

229–442	Advanced Food Studies	3
229–461	Social and Cultural Aspects of Food	2
229–499	Independent Studies (Food Science)	1–6
229–508	Food Seminar	2
229–546	Modern Methods in Food Preparation	2–3
229–556	Advanced Experimental Foods	3–4

NUTRITION EMPHASIS

229–433	Maternal and Child Nutrition	3
229–499	Independent Studies (Nutrition)	1–6
229–501	Trends in Nutrition	2
229–511	Seminar Nutrition	2
229–502	Minerals and Vitamins	3
229–529	Proteins	3
229–536	Carbohydrates and Lipids	3

RECOMMENDED AND FREE ELECTIVE COURSE WORK: 3–7 semester credits

In consultation with the major adviser, select sufficient courses to fulfill the total number of credits required for the degree.

HOME ECONOMICS

212–481	Problems in Home Economics	
	1. Dynamics of Parent-Child Interaction	2
	2. Dynamics of Marital Interaction	2

LIBERAL STUDIES

308–432	Heredity and Eugenics	3
311–417	Physical Chemistry	3
311–428	Physical Chemistry Laboratory	1
354–541	Digital Computer Programming	2
387–430	Sociology of the Community	3
387–460	Juvenile Delinquency	3
387–475	Sociology of Minority Groups	3
391–470	Television Programming and Performance	3

EDUCATION

407–360	Audio-Visual Education	2
407–551	Programmed Instruction	2
421–500	Philosophy of Modern Education	2
421–516	Education Evaluation	2
442–544	Seminar in Home Economics Education	
	1. New Developments in Curriculum Construction	2
	2. New Developments in Methods and Materials	2
	3. College Teaching of Home Economics	2
459–526	Psycho-Social Aspects of Disability	3
479–350	Adolescent Psychology	3
479–352	Child Psychology	3
479–513	Personality	2
479–555	Advanced Psychology of Learning	2

FREE ELECTIVES

Elect any course from the Graduate Course List. Substitutions in the course work listed may be approved by the Dean of The Graduate College through petition by the student with the approval of the major adviser.

HOME ECONOMICS EDUCATION

The curriculum leading to the master of science degree with a major in Home Economics Education is designed to add to the competency of teachers, extension educators, supervisors, coordinators, administrators and other educational workers. There may be considerable flexibility in planning a program, in consultation with the major adviser, to meet the needs and goals of the student.

ADMISSION REQUIREMENTS

To be admitted on full status to the major in Home Economics Education, the applicant must have a bachelor's degree from an accredited college with at least a 2.75 undergraduate grade point average based on a system of A=4, B=3, C=2, D=1, F=0.

In addition, it is recommended that the student seeking admission have a baccalaurate degree with a major in Home Economics Education, Home Economics or a closely related field with a comprehensive program in Home Economics or Education. Applicants holding bachelor's degrees in majors other than Home Economics Education may be considered individually for admission to the program.

A deficiency in the admission requirements does not preclude admission but it may require taking undergraduate work and/or increase the amount of course work required to earn the degree.

GRADUATION REQUIREMENTS

To be awarded the master of science degree with a major in Home Economics Education the student must earn not less than 30 credits with an average grade of B or better, 15 credits of which shall be in 500 level (graduate only) courses.

BASIC REQUIRED COURSE WORK: 8 or 12 semester credits

		Semester Credits
421–501	Research Procedures	2
421–510	Applied Research	2
421–561	Educational Statistics —and either—	2
421–570	Thesis (Plan A), —or—	6
442–575	Problems in Home Economics Education (Plan B)	2

MAJOR REQUIRED COURSE WORK: minimum of 6 to 8 semester credits

421–516	Educational Evaluation	2
421–527	Supervision of Student Teachers	2
442–508	Curriculum Studies in Home Economics	2
442–512	Home Economics for the Junior High School	3
442–544	Seminars in Home Economics Education	
	1. New Developments in Curriculum Construction	2
	2. New Developments in Methods and Materials	2
	3. New Developments in Departmental Planning	2
	4. College Teaching of Home Economics	2
	5. Individualized Instruction	2
	6. Contemporary Issues in Home Economics Education	3
469–509	Problems in Teaching Vocational, Technical & Adult Education	2

RESTRICTED ELECTIVE COURSE WORK
In addition, the student will select an emphasis in accordance with her goals from the following:

CHILD DEVELOPMENT AND FAMILY LIFE

212–437	Seminar in Child Development	2
212–481	Problems in Home Economics	2
212–528	Family Life Issues	2
212–542	Human Development	2

CLOTHING AND TEXTILES

214–450	Tailoring	2
214–479	Recent Developments in Clothing and Textiles	2
214–505	Clothing Today's Family	2
214–514	Seminar in Clothing and Textiles	2

FOOD SCIENCE AND NUTRITION

229–501	Trends in Nutrition	2
229–508	Food Seminar	2
229–511	Nutrition Seminar	2
229–556	Advanced Experimental Foods	3

HOUSING AND INTERIOR DESIGN

304–423	Problems in Interior Design	3
304–434	Period Furnishings	3
304–448	Housing	3

MANAGEMENT, ECONOMICS AND EQUIPMENT

244–400	Demonstration Techniques	2
244–428	Family Finance	2
244–506	Trends in Home Management	2

GENERALIST IN HOME ECONOMICS
A selection may be made from each of the Home Economics Substantive areas listed above.

EDUCATION AND PSYCHOLOGY

421–500	Philosophy of Modern Education	2
479–513	Personality Theory	2
479–555	Advanced Psychology of Learning —and either—	2
479–350	Adolescent Psychology —or—	3
479–352	Child Psychology	3

PSYCHOLOGY AND GUIDANCE

479–513	Personality Theory	2
479–475	Counseling Theory	2
479–491	Psychology of Careers —and either—	2
421–552	Group Guidance Procedures —or—	2
479–490	Aptitude and Achievement Appraisal	2

SOCIOLOGY

387–315	Sociology of the Family	3
387–350	Social Psychology —and either—	3
387–460	Juvenile Delinquency —or—	3
387–475	Sociology of Minority Groups	3

VOCATIONAL COORDINATION

421–502	Principles of Supervision	2
469–472	Coordination	2
469–509	Problems of Teaching Vocational, Technical, and Adult Education	2
469–573	Problems in Coordination	2

CORRELATED SUBSTANTIVE AREAS

387–302	Introduction to Social Work	3
391–470	Television Programming and Performance	3
326–415	Technical Writing for Home Economics	3
421–479	Public Relations	2

ADDITIONAL RESTRICTED ELECTIVE COURSE WORK
Sufficient additional course work to complete the 30 credits are to be selected in consultation with the major adviser from the courses in the areas of Clothing and Textiles, Food Science and Nutrition, Child Development and Family Life, Management and Equipment, Psychology, Counseling and Guidance, Education, Art, or Sociology.

INDUSTRIAL EDUCATION

The curriculum for the master of science degree in Industrial Education was especially designed for individuals with undergraduate study in industrial arts, American Industry, industrial education and related fields, however, the program is also open to others interested in entering the industrial education field.

Specifically, this major is designed to provide advanced instruction in industrial education for:

1. Secondary school industrial arts teachers, supervisors, and administrators.
2. Junior college, college and university industrial arts teachers, supervisors, and administrators.
3. Those desiring knowledge and competence related to the American Industry Project.
4. Those who have interest in special student groups such as the disadvantaged, the slow learner, the underachiever, the handicapped and the gifted.
5. Those who later desire vocational certification.

ADMISSION REQUIREMENTS

To be admitted on full status to the major in Industrial Education the applicant must have a bachelor's degree awarded by an accredited college with at least a 2.75 undergraduate grade point average based on a system of A=4, B=3, C=2, D=1, and F=0.

In addition, the applicant should have an undergraduate major in industrial arts education or its equivalent. This assumes preparation and certification (or qualification for such certification) for teaching industrial arts.

A deficiency in these admission requirements does not preclude admission but it may require taking undergraduate work and/or increasing the amount of course work required to earn the degree.

GRADUATION REQUIREMENTS

To be awarded the master of science degree with a major in Industrial Education the student must earn not less than 30 semester credits with an average grade of B or better, 15 credits of which shall be in 500 level (graduate only) course work. All students must complete the basic and core required course work listed below and select additional courses in consultation with their adviser from the other course work listed to fulfill the minimum of 30 semester credits required for earning the degree.

For students planning careers in secondary or college teaching, it is recommended that their technical work, counting both undergraduate and graduate be at least 46 semester credits.

BASIC REQUIRED COURSE WORK: 8 to 12 semester credits

		Semester Credits
421–501	Research Procedures	2
421–510	Applied Research	2
421–561	Educational Statistics —and either—	2
421–570	Thesis (Plan A) —or—	6
449–535	Problems in Industrial Education (Plan B)	2

CORE REQUIRED COURSE WORK: 4-6 semester credits

421–504	History of Industrial Education —and either—	2
421–500	Philosophy of Modern Education —or—	2
479–555	Advanced Psychology of Learning —or both—	2

RESTRICTED ELECTIVE COURSE WORK

Sufficient course work may be selected from the two lists below to fulfill the 30 credits required for the degree. The student in consultation with the major adviser may confine his selection to either the technical or the professional list or select a combination from these and a maximum of 6 credits of liberal studies course work.

TECHNICAL RESTICTED ELECTIVE COURSE WORK: no minimum or maximum

		Semester Credits
100–542	Advanced Technical Problems — General Shop	2–6
107–405	Advanced Photography	2
107–445	Color Photography	2
107–540	Advanced Technical Problems — Audio-Visual Communications	2–6
124–412	Basic Instrumentation and Control	2
124–424	Network Analysis	3
124–444	Communications Systems I	3
124–446	Communications Systems II	3
124–454	Electronic Control Systems	3
124–458	Feedback Control Systems	3
124–462	Pulse and Switching Circuits	3
124–464	Computer Systems	3
124–544	Advanced Technical Problems — Electricity	2–6
137–449	Printing Economics	2
137–450	Color Separation	2
137–459	Relief and Screen Processes	2
137–543	Advanced Technical Problems — Graphic Arts	2–6
148–401	Mechanical Design Problems	3
148–431	Architectural Design IV	3
148–434	Product Development	2
148–463	Industrial Design Workshop	2
148–475	Graphic Analysis and Computation	2
148–476	Computer Assisted Design Problems	2
148–541	Advanced Technical Problems — Industrial Graphics	2–6
150–400	Quality Control	2
150–410	Production Control	2
150–428	Production Processing	3
150–460	Industrial Management	2
150–510	Advanced Technical Problems — Industrial Technology	2–6
157–418	Metallurgy	2
157–457	Welding II	2
157–461	Tool and Die Making	2
157–462	Maintenance of Metalworking Equipment	2
157–477	Metal Production and Processes	2
157–464	Numerical Control in Manufacturing	2
157–545	Advanced Technical Problems — Metals	2–6
176–451	Auto Service Management	2
176–456	Automotive Transmissions and Drive Lines	2
176–466	Automotive Machining	2
176–468	Automotive Diagnosis and Tune-up	2
176–547	Advanced Technical Problems — Power and Transportation	2–6
182–423	General Safety	3
182–454	Industrial Safety	3
196–440	Plastics II	2
196–464	Tool and Machine Conditioning	2
196–546	Advanced Technical Problems—Woodworking	2–6

PROFESSIONAL RESTRICTED ELECTIVE COURSE WORK: no minimum or maximum

421–470	Conference Leading	2
421–479	Public Relations	2
421–481	American Higher Education	2
421–495	Personal Learning Experience	2
421–502	Principles of Supervision	2
421–505	Social Thought of American Educators	2
421–511	Introduction to Student Personnel Services	2
421–516	Education Evaluation	2
421–526	Administration	2
421–533	Survey Procedures	2
421–599	Independent Studies	1–10
449–433	Shop Planning and Equipment Selection	2
449–437	School Shop Organization and Management	2
449–443	Problems in Teaching Trade Technical and Industrial Subjects	2
449–527	Supervision of Student Teaching	2
449–546	Seminars in Industrial Education	2
449–568	Curriculum Procedures II	2
459–507	Introduction to Vocational Rehabilitation	3
459–517	Occupational Analysis and Information	2
459–521	Medical Aspects of Disability	3
459–526	Psycho-Social Aspects of Disability	2
469–402	Principles of Vocational-Technical and Adult Education	2
469–415	Technical Education Programs	2
469–472	Coordination	2
469–492	Administration of Vocational, Technical and Adult Education	2
479–430	Industrial Psychology	2
479–431	Abnormal Psychology	3
479–432	Psychology of the Exceptional Child	2
479–435	Personnel Management	3
479–455	Human Relations in the Community	2
479–490	Aptitude and Achievement Appraisal	2
479–491	Psychology of Careers	2
479–513	Personality	2
479–534	The Technical-Vocational Education Student	2
479–536	American College Student	2

LIBERAL STUDIES RESTRICTED ELECTIVE COURSE WORK: maximum of 6 semester credits may be selected in consultation with the major adviser.

Substitutions in the course work listed may be approved by the Dean of The Graduate College through petition by the student with the recommendation of the major adviser.

VOCATIONAL EDUCATION

This program leading to a master of science degree with a major in Vocational Education is designed to increase the personal and professional competencies of those who plan to serve in a high school or post high school program as a teacher, coordinator, supervisor, or director of vocational education. Two emphases of study (teaching and administration) are available for the student, each of which contains a choice of electives adapted to the goals of the individual. Through conferences with the major adviser, the student designs a program of work within a general framework of courses.

ADMISSION REQUIREMENTS

To be admitted on full status to the major in Vocational Education the applicant must have a bachelor's degree awarded by an accredited college with at least a 2.75 undergraduate grade point average based on a system of A=4, B=3, C=2, D=1, and F=0.

In addition, the applicant should have an undergraduate major or concentration in an appropriate field; e.g. agriculture, commerce, home economics or home economics education, engineering, industrial education, industrial technology, or related subject area; and be certified as a vocational teacher, or declared to be qualified for such certification by a state certifying authority.

A deficiency in these admission requirements does not preclude admission, but it may require taking undergraduate work and/or increase the amount of graduate work required to earn the degree.

GRADUATION REQUIREMENTS

To be awarded the master of science degree with a major in Vocational Education the student must earn not less than 30 semester credits with an average of B or better, 15 credits of which shall be in the 500 level (graduate only) course work. All students must complete the basic major required course work listed below and select additional courses in consultation with the major adviser from the recommended or optional course work lists to fulfill the minimum of 30 semester credits required.

BASIC REQUIRED COURSE WORK: 8 or 12 semester credits

		Semester Credits
421–501	Research Procedures	2
421–510	Applied Research	2
421–561	Educational Statistics —and either—	2
421–570	Thesis (Plan A) —or—	2–6
469–536	Problems in Vocational, Technical and Adult Education (Plan B)	2

MAJOR REQUIRED COURSE WORK: 6 credits

421–500	Philosophy of Modern Education	2
469–402	Principles of Vocational, Technical and Adult Education	2
479–555	Advanced Psychology of Learning	2

MAJOR RESTRICTED ELECTIVE COURSE WORK: a minimum of 4 semester credits from each emphasis plus an additional 8 semester credits may be elected from either or both lists.

TEACHING EMPHASIS: minimum of 4 to a maximum of 12 credits

407–360	Audio-Visual Education	2
421–401	Introduction to Guidance and Counseling	2

421–504	History of Industrial Education	2
421–505	Social Thought of American Educators	2
421–516	Education Evaluation	2
421–533	Survey Procedures	2
421–539	High School Curriculum	2
449–568	Curriculum Procedures II	2
469–415	Technical Education Programs	2
469–509	Problems in Teaching Adult Education	2
469–558	Seminar in Vocational Education	2
479–491	Psychology of Careers	2
479–534	Technical, Vocational Education Student	2

ADMINISTRATION EMPHASIS: minimum of 4 to a maximum of 12 credits

320–520	Labor and Industrial Relations	2
421–470	Conference Leading	2
421–479	Public Relations	2
421–481	American Higher Education	2
421–502	Principles of Supervision	2
421–526	Administration	2
469–472	Coordination	2
469–492	Administration of Vocational, Technical and Adult Education	2
469–558	Seminar in Vocational Education	2
469–573	Problems in Coordination	2

RESTRICTED ELECTIVE COURSE WORK: from 0 to a maximum of 8 semester credits

Technical course work in the field suitable for the individual may be arranged in conference with the major adviser. All students are urged to investigate other technical offerings and confer with the major adviser as to their suitability.

124–544	Advanced Technical Problems—Electricity	2
137–543	Advanced Technical Problems—Graphic Arts	2
148–541	Advanced Technical Problems—Industrial Graphics	2
157–545	Advanced Technical Problems—Metals	2
176–547	Advanced Technical Problems—Power and Transportation	2
196–546	Advanced Technical Problems—Woodworking	2
421–497	Field Experience	2

Substitutions in the course work listed may be approved by the Dean of The Graduate College through petition by the student with the recommendation of the major adviser.

VOCATIONAL REHABILITATION

This curriculum leading to a master of science degree with a major in Vocational Rehabilitation with specialization in vocational evaluation is designed to develop the personal and professional competencies of those who will work in rehabilitation. Its goal is to provide a working knowledge of the various factors affecting the rehabilitation of disabled people and the process of vocational evaluation through the use of work task, work situations, and environment as a means of vocational evaluation of disabled people not assessable through standard testing procedures. In addition, the program is designed to develop the person to work with other professional people as a member of a team doing behavioral modification.

ADMISSION REQUIREMENTS

To be admitted on full status to the major in Vocational Rehabilitation the applicant must have a bachelor's degree awarded by an accredited college with at least a 2.75 undergraduate grade point average based on a system of A=4, B=3, C=2, D=1, and F=0.

In addition, it is highly recommended that the applicant have an undergraduate major in industrial education, industrial technology, home economics, occupational therapy, psychology, or sociology or a field related to those listed. Work experience may be considered in lieu of a named undergraduate major.

Further, the applicant should possess personal characteristics necessary to work with handicapped people—personal and social maturity, a combination of patience, empathy, and understanding, interest in the welfare of individuals, and a derivation of personal satisfaction while working with handicapped people.

A deficiency in these admission requirements does not preclude admission but it may require taking undergraduate work and/or increase the amount of graduate course work required to earn the degree.

GRADUATION REQUIREMENTS

To be awarded the master of science degree with a major in Vocational Rehabilitation (concentration on vocational evaluation) the student must earn not less than 36 semester credits with an average grade of B or better, 18 credits of which shall be in 500 level course work; and show evidence that the personal characteristics necessary to work with handicapped people have been developed.

BASIC REQUIRED COURSE WORK:

		Semester Credits
421–501	Research Procedures	2
421–561	Educational Statistics	2

MAJOR REQUIRED COURSE WORK:

459–507	Introduction to Vocational Rehabilitation	3
459–517	Occupational Analysis and Information	2
459–521	Medical Aspects of Disability	3
459–523	Procedures of Vocational Evaluation	4
459–526	Psycho-Social Aspects of Disability	3
459–538	Psychiatric and Intellectual Aspects of Disability	3
459–553	Procedures of Work Adjustment	4
459–557	Man and Work	2
459–583	Vocational Evaluation Field Practice	4
479–475	Counseling Theory	2
479–490	Aptitude and Achievement Appraisal	2

Substitutions in the course work listed may be approved by the Dean of The Graduate College through petition by the student with the recommendation of the major adviser.

PART III
COURSE DESCRIPTION

COURSE NUMBERING SYSTEM

Course numbers are designed, in part, to indicate the school and the department within the school that are offering the course. An example: 176-547 Advanced Technical Problems is offered by the School of Applied Science and Technology (1), by the school's Power Technology Department (76) and is a graduate only (5) fifth year course. The fifth and sixth numbers (47) are assigned by the Registrar's Office for office use. School and department numbers are:

SCHOOL OF APPLIED SCIENCE AND TECHNOLOGY (1)

107 Audio Visual
124 Electronics
137 Graphic Arts
148 Industrial Graphics
150 Industrial Technology
157 Metals
152 Off Campus Work Experience
176 Power Technology
182 Safety
196 Wood Technics and Plastics

SCHOOL OF HOME ECONOMICS (2)

212 Child Development and Family Life
214 Clothing and Textiles
227 Family Relations
229 Food Science and Nutrition
244 Home Management
245 Hotel and Restaurant Management

SCHOOL OF LIBERAL STUDIES (3)

303 Anthropology
304 Art
308 Biology
309 Business Administration
311 Chemistry
320 Economics
326 English
328 Foreign Languages (Fr-French 328; SP-Spanish 329)
336 Geography
338 History
352 Journalism
354 Applied Math
355 Mathematics
360 Music
365 Philosophy
366 Physical Education
367 Physical Education - Men
368 Physical Education - Women
372 Physics
375 Political Science
384 Science
387 Sociology
388 Social Science
391 Speech

SCHOOL OF EDUCATION (4)

401 American Industry Education
405 Art Education
407 Audio-Visual Education
416 Distributive Education
421 Education
442 Home Economics Teacher Education
449 Industrial Teacher Education
459 Vocational Rehabilitation
469 Vocational Education
477 Pre-School Education
479 Psychology

COURSE SELECTION

Graduate course work is not exclusively designated except for the 500 series courses. Certain selected courses designated in the 300 or 400 series have been adjudged to be available for graduate credit. Usually in these mixed (graduate and undergraduate) classes there is something extra demanded of the graduate student. At least one-half of the course work taken to earn a graduate degree must be in the 500 series courses. Course work taken as an undergraduate cannot be transferred to serve as graduate credit.

The courses listed in this part are only those which are specifically listed in the several programs detailed in Part II. Inquiry should be made of the major adviser as to other courses which may have been or may be qualified as graduate course work.

SCHOOL OF APPLIED SCIENCE AND TECHNOLOGY (1)

100-542 ADVANCED TECHNICAL PROBLEMS — GENERAL SHOP (Non departmental) 2-6 Cr.

Prerequisites: 421-501 and six semester credits in general shop, and consent of head of General Shop Department. Approval of the major adviser is required prior to enrollment.

Advanced technical work, experimental work, technical reports in the general shop.

107-405 ADVANCED PHOTOGRAPHY 2 Cr.

Prerequisite: 107-205

Advanced monochromatic photography including camera techniques, composition, lighting, selection of photographic materials, film development, contact printing, enlarging, toning and application.

107-445 COLOR PHOTOGRAPHY 2 Cr.

Prerequisite: 107-205

Fundamentals of color photography including color theory, composition, multilayer films, color film processing, color printing, and application.

107-540 ADVANCED TECHNICAL PROBLEMS — AUDIO-VISUAL 2-6 Cr.

Prerequisite: 421-501, six semester credits in the audio-visual field including graphic arts, consent of the head of the Audio-Visual Center. Approval of the major adviser is required prior to enrollment.

Advanced technical work for specialists in the audio-visual field. Recent developments, advanced technical work, experimental work, and technical reports in audio-visual education.

124-424 NETWORK ANALYSIS 3 Cr.

Prerequisite: Calculus 124-228

A theoretical approach of electrical network analysis. Network equations, LaPlace transformation, frequency domain analysis, applied differential equations, steady state and transient analysis. No laboratory work is required. This course is required for students to pursue more advanced studies in electronics.

124-444 COMMUNICATION SYSTEMS I 3 Cr.

Prerequisite: 124-440

An analytical study of communication transmission and receiving systems, the circuits and design techniques of systems, signal transmission systems, signal receiving systems, and applied techniques. Laboratory work is required.

124-446 COMMUNICATION SYSTEMS II 3 Cr.

Prerequisite: 124-444

An analytical study of antenna systems, electronmagetic field theory, low frequency antenna, high frequency antenna theory and design, radio frequency transmission lines and graphical synthesis of impedance matching networks. Laboratory work is required.

124-454 ELECTRONIC CONTROL SYSTEMS 3 Cr.

Prerequisites: 124-352, 124-424

General electronic control systems, sensing devices, control devices, sequence control, basic feedback control principles, analog computation and control, numerical controls. Laboratory work is required.

124-458 FEEDBACK CONTROL SYSTEMS 3 Cr.

Prerequisite: 124-454

Models and equations of linear system, feedback control components, general theory, response of feedback systems, the Nyquist criterion, Bode plot analysis, polar plots, frequency response, root-loci techniques, nonlinear system analysis. Laboratory work is required.

124-462 PULSE AND SWITCHING CIRCUITS 3 Cr.

Prerequisites: 124-326, 124-424

Linear wave shaping, pulse transformers and delay lines, steady state switching, clamping and clipping circuits, switching circuits, logic circuits, multivibrators, time base generators, sampling gates. Laboratory work is required.

124-464 COMPUTER SYSTEMS 3 Cr.

Prerequisite: 124-462

An analytical study of electronic circuit design, philosophy of circuit design, general design procedures, C.C. and low frequency design, high frequency design, digital circuit design, switching circuit design, power supply, analog computer design, circuit evaluation techniques. Laboratory work is required.

124-544 ADVANCED TECHNICAL PROBLEMS — ELECTRICITY 2-6 Cr.
Prerequisites: 421-501, six semester credits in electrical field, consent of Head of Electricity Department. Approval of the major adviser is required prior to enrollment.
Advanced technical work for specialists in the electrical field. Recent developments, advanced technical work, experimental work, and technical reports in electricity.

137-449 PRINTING ECONOMICS 2 Cr.
Estimating production costs, specification of equipment, materials inventory and control, and the study of systems which expedite graphic reproductions.

137-450 COLOR SEPARATION 2 Cr.
Prerequisite: 137-376 or consent of instructor
Study of the nature of color and light. Color separation from reflected and transmission copy. Theory of filters, densipometry, and their relation to color separation. Direct and indirect photographic color separation methods.

137-459 RELIEF AND SCREEN PROCESSES 2 Cr.
Prerequisite: 137-236
Study in depth of letterpress and screen process image transfer machines and associated procedures including printability of varied interceptors.

137-543 ADVANCED TECHNICAL PROBLEMS — GRAPHIC ARTS 2-6 Cr.
Prerequisites: 421-501, six semester credits in Graphic Arts field, consent of Head of Graphic Arts Department. Approval of the major adviser is required prior to enrollment.
Advanced technical work for specialists in the graphic arts field. Recent developments, advanced technical work, experimental work, and technical reports in graphic arts.

148-401 MECHANICAL DESIGN PROBLEMS 3 Cr.
Prerequisite: 148-301
The study of the scientific methods of problem solving, applied mechanics, materials behavior, and manufacturing methods, correctly proportional stationary and moving parts, and the generation, transformation, or consumption of mechanical energy in the design of a machine.

148-431 ARCHITECTURAL DESIGN IV 2 Cr.
Prerequisite: 148-233
Design of a shop, professional, apartment or industrial building. Working drawings and rendering perspective.

148-434 PRODUCT DEVELOPMENT 2 Cr.
Prerequisite: 148-222 or 148-233 or consent of instructor
Independent research directed to the solution of a student-selected design problem requiring application of the sciences, industrial graphics, identification of manufacturing methods, marketing and cost analysis, and model or prototype construction when appropriate.

148-463 INDUSTRIAL DESIGN WORKSHOP 2 Cr.
Product design from the inception of the idea to marketing the product. Procedure and techniques will be illustrated — some opportunity for laboratory work.

148-475 GRAPHIC ANALYSIS AND COMPUTATION 2 Cr.
Prerequisite: 148-250
The study of fundamental graphical concepts, abstract graphic principles, formulas, and equations, vector geometry, and graphical concepts as they apply to modern engineering technology.

148-476 COMPUTER ASSISTED DESIGN PROBLEMS 2 Cr.
Prerequisite: 148-250
An introduction to the relationship of the computer to drafting and plotted design, design automation, introduction to mechanical design problem analysis for computers, mathematical and simulation models for use in the solution of mechanical design problems.

148-541 ADVANCED TECHNICAL PROBLEMS — INDUSTRIAL GRAPHICS 2-6 Cr.
Prerequisites: 421-501, six semester credits in drafting field, consent of Head of Industrial Graphics Department. Approval of the major adviser is required prior to enrollment.
Advanced technical work for specialists in the drafting field. Recent developments, advanced technical work, experimental work and technical reports in drafting.

150-410 PRODUCTION CONTROL 2 Cr.
Prerequisite: 150-300, 354-130
Introduction to industrial plant operation; production planning and control. Forecasting, inventory control, production requirements, routing, scheduling, dispatching, and follow-up

150-428 PRODUCTION PROCESSING 3 Cr.
Prerequisite: 150-300
Production processes with special consideration to product design as related to economic production. Emphasis on factors which influence the choice and sequence of process to obtain an end product.

150-460 INDUSTRIAL MANAGEMENT 2 Cr.
Prerequisites: 150-290
Management problems requiring use of prior course work; emphasis on the human element. Use of role playing, conferences, outside speakers, and written reports related to actual and simulated case problems and industrial games.

150-510 ADVANCED TECHNICAL PROBLEMS — INDUSTRIAL TECHNOLOGY 2-6 Cr.

Prerequisites: 421-501, six semester credits in industrial technology field or equivalent, consent of Head of Industrial Technology Department. Approval of the major adviser is required prior to enrollment .

Advanced study in industrial management, management control, product development, or process and facility planning. Recent developments, advanced technical work, experimental work, and technical reports. A specific problem area for study in this course must be identified by the student prior to registering for this course.

157-418 METALLURGY 3 Cr.

Prerequisite: 311-115

Properties of crystalline solids, production of iron and steel, the carbon-iron equilibrium diagram, principles of heat treatment, properties of ferrour alloys. Production, properties, and theory of the most important non-ferrous metals and alloys.

157-423 PLASTICS MOLD MAKING 2 Cr.

The student is required to design a metal mold for a plastic item and progress through the construction stages to the point where the mold will produce finished work pieces. A problem solving course in a specialized technical area.

157-457 WELDING II 2 Cr.

Prerequisite: 157-455

Advanced work in arc and oxy-acetylene welding techniques; vertical, horizontal, overhead positions; destructive and non-destructive testing; MIG and TIG welding processes; oxy-acetylene machine and air carbon arc cutting.

157-461 TOOL AND DIE MAKING 2 Cr.

Operations and technical information units for selected examples of single station cutting dies; drawing, expanding, non-cutting, assembling, progressive, and finishing dies. Layout, fabrication methods and operations involved are planned by the student.

157-462 MAINTENANCE OF METAL WORKING EQUIPMENT 2 Cr.

Prerequisite: 157-235

Repair and preventive maintenance of machine tool equipment. Emphasis on use of universal tool and cutter grinder. Alignment, fitting, and adjustment of precision machine tools.

157-477 METAL PRODUCTION AND PROCESSES 2 Cr.

Prerequisites: 157-102

Advanced study in manufacturing processes and the production of metals. Student opportunity to study areas in which he is deficient.

157-464 NUMERICAL CONTROL IN MANUFACTURING 2 Cr.

Prerequisite: A working knowledge of the basic machining processes is recommended.

An investigation of numerical control of machine tools, justification of numerical control, types of control units and systems, feedback systems, manuscript writing and manual programming, tape punching and machine setup, fixture design and tool setting.

157-545 ADVANCED TECHNICAL PROBLEMS — METALS 2-6 Cr.

Prerequisites: 421-501, six semester credits in Metals field, consent of Head of Metals Department. Approval of the major adviser is required prior to enrollment.

Advanced technical work for specialists in the metals field. Recent developments, advanced technical work, experimental work and technical reports in metals.

176-451 AUTO SHOP SERVICE MANAGEMENT 2 Cr.

Management practices associated with selecting, procuring, installing, preventive maintenance and repairing of diagnostic equipment for auto service facilities. Personnel assignment and customer relations.

176-456 AUTOMOTIVE TRANSMISSIONS AND DRIVE LINES 2 Cr.

Prerequisites: 176-334

Power transmission through gears, clutches and drives common to the automobiles. Fluid couplings, gear sets, differentials, transmissions and drive lines.

176-466 AUTO ENGINE REBUILDING 2 Cr.

Prerequisite: 176-238

Service procedures and practices for overhauling four stroke cycle gasoline engines including cylinders, pistons, rings, valve systems, camshafts, and crankshafts.

176-468 AUTO DIAGNOSIS & TUNE UP 2 Cr.

Prerequisites: 176-341, 176-342

Practicum in automotive tune-up and diagnostic service procedures; service operations with all types of modern automotive test equipment.

176-547 ADVANCED TECHNICAL PROBLEMS — POWER AND TRANSPORTATION 2-6 Cr.

Prerequisites: 421-501, six semester credits in the power and transportation field, consent of Head of Power and Transportation Department. Approval of the major adviser is required prior to enrollment.

Advanced technical work for specialists in the power and transportation field. Recent developments, advanced technical work, experimental work, and technical reports in power and transportation.

182-423 GENERAL SAFETY 3 Cr.
Introduction to the philosophy and principles of accident prevention. Supervising school safety programs. Identification of resources and content such as motor vehicle, home, public, farm, industrial, school, recreational, and civil defense.

182-454 INDUSTRIAL SAFETY 3 Cr.
An overview of occupational accident prevention programs. Emphasis on techniques of measurement, cost of accidents, locating and identifying accident sources, psychology of occupational safety and problems of selecting corrective action.

196-440 PLASTICS II 2 Cr.
Prerequisite: 196-203
Technical information relating to plastic materials and to tooling design for plastics. Product development with emphasis on experimental design in tooling and quality control.

196-464 TOOL AND MACHINE CONDITIONING 2 Cr.
Prerequisite: 196-103
Technical information on woodworking equipment, cutting theory, safety, and shop organization. Maintenance of woodworking machines, saw fitting, and general hand tool fitting.

196-546 ADVANCED TECHNICAL PROBLEMS — WOODWORKING 2-6 Cr.
Prerequisites: 421-501, six semester credits in Woodworking, consent of Head of Wood Technics Department. Approval of the major adviser is required prior to enrollment.
Advanced technical work for specialists in the woodworking field. Recent developments, advanced technical work, experimental work, and technical reports.

SCHOOL OF HOME ECONOMICS — (2)

212-437 SEMINAR IN CHILD DEVELOPMENT 2 Cr.
Prerequisite: Consent of Instructor
Exploration in depth of special problems and aspects in the child development field with preference given to student's interests.

212-481 DYNAMICS OF MARITAL INTERACTION — PROBLEMS IN HOME ECONOMICS 2 Cr.
Prerequisite: Consent of Instructor
Patterns of husband-wife power distribution, task differentiation, decision making, communication, role adaptation, and marital satisfaction over the family life cycle. A theoretical analysis of marital behavior within the family as a social system.

212-528 FAMILY LIFE ISSUES 2 Cr.
A study of current issues and problems in marriage and the family. An investigation of research, literature and consideration of theoretical interpretations in today's world. An exploration of how familial experiences affect behavioral patterns and attitudes of children, adults and self.

212-542 HUMAN DEVELOPMENT 2 Cr.
Human development, theory, research, changing trends, problems and interpretations will be explored. Emphasis on application of scientific knowledge to practical relationships with children in the family, school, and community and implications of child development concepts towards understanding of self and others.

214-411 DECORATIVE FABRICS 2 Cr.
Study of historic and contemporary fabrics with analysis of designs and techniques of decorating fabrics. The contribution of decorative fabrics to the enrichment of human experience.

214-412 DRAPING 3 Cr.
Prerequisite: 214-218
Application of principles of costume design in the construction of garments by means of draping. Emphasis on creativity.

214-450 TAILORING 3 Cr.
Prerequisite: 214-218
Application of tailoring techniques in making suits and coats.

214-465 EUROPEAN STUDY TOUR 3-6 Cr.
Tour of European Centers of art, clothing, and textiles. Study of the cultural patterns they reflect. Six week program includes lectures by consultants and seminars on the various phases of the fashion and fabric industries. (Summer)

214-471 HISTORY OF COSTUME: ANCIENT TO EUROPEAN 1900 3 Cr.
Development of costume throughout the ages. Fashion as it reflects the cultures of the past. Influence of the past on present-day costume.

214-475 HISTORY OF AMERICAN COSTUME 2 Cr.
Costume as it developed in the United States from Colonial Period to present day. Aspects of costume reflecting the cultural development. Influences of foreign countries upon costume and culture.

214-479 RECENT DEVELOPMENTS IN CLOTHING AND TEXTILES 2 Cr.
Prerequisite: 214-218
Discussion, demonstration, and laboratory work. Individual experimental problems to determine choice, use, and care of modern fibers and fabrics. Newer construction techniques adapted for these fabrics.

214-480 SOCIAL-PSYCHOLOGICAL ASPECTS OF CLOTHING 3 Cr.

Evaluation of research in consumer motivation, shopping behavior, and satisfactions with garments. Study is made of how society influences an individual's clothing choices and practices at various age levels.

214-498 NATIONAL STUDY TOUR TO FASHION INDUSTRY 1 Cr.

Prerequisite: Consent of instructor

Membership limited to 20; Clothing and Textiles majors have priority. Five day visit in New York City or (alternate city). Program will involve study tours, discussions, and lectures by leading people in American fashion market.

214-505 CLOTHING TODAY'S FAMILY 2 Cr.

Factors affecting family expenditures for clothing. Clothing needs as affected by various psychological, social, and economic influences. Selection, purchasing, care and budgeting of clothing. The interrelationship of producers, distributors, and consumers.

214-514 SEMINAR IN CLOTHING AND TEXTILES 2 Cr.

Prerequisite: Teaching experience or consent of instructor

Discussion and interpretation of recent developments in clothing and textiles. Individual reports.

214-517 ADVANCED APPAREL DESIGN 3 Cr.

Prerequisite: 214-313, 214-412, or consent of instructor

Advanced study of creative apparel design and development of designs through draping or flat pattern methods. Provides opportunity for students to create apparel design ideas adaptable to various types of apparel in relation to: type of fabric, style, and price level.

214-544 WORKSHOP IN CLOTHING AND TEXTILES 2 Cr.

Prerequisite: Teaching experience

Opportunity for cooperative work in some aspect of clothing study.

214-551 PROBLEMS IN CLOTHING AND TEXTILES AND RELATED ART 2 Cr.

Prerequisites: 421-510, Approval of the major adviser.

Identification, selection and completion of a problem in Clothing and Textiles culminating in a Plan B paper.

214-572 ADVANCED TEXTILES 2 Cr.

Prerequisite: 214-215

Investigations and new developments in the textile field. Opportunity for individual problems.

229-433 MATERNAL AND CHILD NUTRITION 3 Cr.

Prerequisites: 229-212, 212-234, 308-214

Application of basic knowledge to maternal, infant, child, and adolescent nutrition.

229-442 ADVANCED FOOD STUDIES 2 Cr.

Prerequisites: 229-230, 229-308

Based on the student's special interest in the field of food selection, preparation, and appraisal.

229-461 SOCIAL AND CULTURAL ASPECTS OF FOOD 2 Cr.

Social, economic, and cultural influence on man's food patterns.

229-501 TRENDS IN NUTRITION 2 Cr.

Prerequisite: 229-212

Practical application of recent developments in the field of nutrition.

229-502 MINERALS AND VITAMINS 3 Cr.

Prerequisite: 229-310

Absorption and intermediary metabolism of minerals and vitamins.

229-508 FOOD SEMINAR 2 Cr.

Discussion and interpretation of recent developments in food preparation, food processing and food products. Choice of problems based on the needs and interests of the students.

229-511 NUTRITION SEMINAR 2 Cr.

Prerequisite: 229-308

Discussion and interpretation of recent developments in fundamental and applied nutrition. Choice of problems based on needs and interests of students.

229-529 PROTEINS 3 Cr.

Prerequisite: 229-310

Digestion, absorption, and intermediary metabolism of protein.

229-536 CARBOHYDRATES AND LIPIDS 3 Cr.

Prerequisite: 229-310

Digestion, absorption, and intermediary metabolism of carbohydrates and lipids.

229-546 MODERN METHODS IN FOOD PREPARATION 2-3 Cr.

Prerequisites: 229-230 and 229-308

Individual development of subject matter, evaluation instruments, instructional materials and demonstration techniques.

229-547 PROBLEMS IN FOOD SCIENCE AND NUTRITION 2 Cr.
Prerequisites: 421-501 and 421-510. Approval of the major adviser.
Identification, selection and completion of a problem in Food Science and Nutrition, culminating in a Plan B paper.

229-556 ADVANCED EXPERIMENTAL FOOD 3-4 Cr.
Prerequisite: 229-438
Principles of research methods applied to directed investigations in food preparation.

SCHOOL OF LIBERAL STUDIES — (3)

303-420 INTRODUCTION TO CULTURAL ANTHROPOLOGY 3 Cr.
Introduction to concepts and methods; variability of culture; outline of cultural elements; processes of cultural change.

304-423 PROBLEMS IN INTERIOR DESIGN 2 Cr.
Prerequisite: 304-334
Advanced work in the design, selection and arrangement of furnishings for living and working quarters. May be repeated.

304-434 PERIOD FURNISHINGS 2 Cr.
A survey of furniture and furnishings in the Western World.

304-448 HOUSING 3 Cr.
Prerequisite: 304-106 or equivalent
Problems in dwelling construction with consideration given to location of the lot, family activities, materials, and cost.

308-432 HEREDITY AND EUGENICS 2 Cr.
Prerequisite: 308-122
The essential principles of genetics and eugenics and their application to the human family. Physical, physiological and mental traits in man; positive and negative eugenics and euthenics.

311-417 PHYSICAL CHEMISTRY 3 Cr.
Prerequisites: 311-115 or 311-135, 355-156, 311-438 recommended
Fundamental physical chemistry; the behavior of gases, the liquid state, the properties of solution, the principles of thermodynamics, thermochemistry.

311-428 PHYSICAL CHEMISTRY LABORATORY 1 Cr.
Prerequisites: 311-115 or 311-135, 355-156, 311-438 recommended
Laboratory which may accompany physical chemistry, normally taken concurrently. Experimental techniques and apparatus. Treatment of experimental data.

320-520 LABOR AND INDUSTRIAL RELATIONS 2 Cr.
Human relations in industry from the viewpoint of labor, management, and the government.

326-415 TECHNICAL WRITING FOR HOME ECONOMICS 3 Cr.
Prerequisite: 325-346, or consent of instructor
An overview of specialized writing done by home economists in business. Experience in preparing reports, letters, and other appropriate materials.

326-416 TECHNICAL WRITING FOR INDUSTRY 3 Cr.
Prerequisite: 326-346 or consent of instructor
A survey of the type of writing current in industry. Writing of business reports and other materials.

326-446 RESEARCH REPORTING 2 Cr.
Effective organization and presentation of individual research.

354-541 DIGITAL COMPUTER PROGRAMMING 2 Cr.
Introduction to computer systems and their utilization. Emphasis on translating language with application to individual research projects, statistical or developmental. Not open to students who have completed 354-141 and 354-241.

387-302 INTRODUCTION TO SOCIAL WORK 3 Cr.
Prerequisite: 387-309 and 387-411
The field of social work as a profession; history and philosophy of social services; basic information for teachers, counselors, and those interested in the profession.

387-315 SOCIOLOGY OF THE FAMILY 3 Cr.
Prerequisite: 387-309
The family as an institution. History; variations in other cultures; relationship to other institutions. Interactions of members in various stages of the life cycle.

387-350 SOCIAL PSYCHOLOGY 3 Cr.
Prerequisite: 387-309
The theory of social interaction and its applications with special emphasis on communication.

387-411 PROBLEMS OF AMERICAN SOCIETY 2 Cr.
Prerequisite: 387-309
Sociological perspective on selected social problems.

387-430 SOCIOLOGY OF THE COMMUNITY 3 Cr.
Prerequisite: 387-309
Structure of the community, chiefly in the U.S. Variability and current trends; research techniques; community development.

387-440 SOCIOLOGY OF WORK 3 Cr.
Prerequisite: 387-309
Human behavior in various types of employment and occupations; trends in the occupational structure of the United States.

387-460 JUVENILE DELINQUENCY 3 Cr.
Prerequisite: 387-309
Definitions and trends of deviant behavior among youth; research findings; efforts toward prevention, control, and treatment.

387-475 SOCIOLOGY OF MINORITY GROUPS 3 Cr.
Prerequisite: 387-309
Social-psychological aspects of the interaction between majority and minority groups; trends of minorities in the United States.

387-490 SOCIOLOGICAL THEORY 3 Cr.
Prerequisite: 387-309
Contributions of major social theorists; chief components of contemporary general sociological theory.

391-406 SPEECH SKILLS FOR EDUCATIONAL LEADERSHIP 2 Cr.
Prerequisite: 391-106
Application of leadership techniques and speech skills in classroom and educational activities.

391-470 TELEVISION PROGRAMMING AND PERFORMANCE 3 Cr.
Prerequisite: 391-106
Planning, writing and performing in instructional, public service, special feature, or dramatic television programs. Programs will be produced in cooperation with students in 107-493, Television Production Techniques.

SCHOOL OF EDUCATION — (4)

407-360 AUDIO-VISUAL EDUCATION 2 Cr.
Methods of selecting and using audio-visual materials effectively in teaching. Experience in operating equipment, production of materials, practice in planning and presenting a lesson.

407-435 FILM HISTORY AND APPRECIATION 3 Cr.
Traces the evolution of the motion picture film as a medium of mass communication and aesthetic expression; contributions of noted film producers are identified.

407-436 FUNDAMENTALS OF MOTION PICTURE PRODUCTION 2 Cr.
Fundamentals of instructional motion picture production applied to individual student films. Production planning, visual continuity, shooting, animation, editing, sound recording, titling and other technical problems of production.

407-493 TELEVISION PRODUCTION TECHNIQUES 3 Cr.
Production of television programs in cooperation with students in 391-470, Television Programming and Performance. Each student will gain experience as director, technical director, cameraman, floor manager, audio controlman, telecine operator, and lighting director. Includes related technical information.

407-494 INSTRUCTIONAL COMMUNICATIONS SYSTEMS 2 Cr.
Prerequisite: 407-360
Application of electronic communications systems used to solve educational problems. Emphasis on audio systems including microphones, tape decks, and duplicators, paging systems, language labs and inter-communication equipment; multi-media systems including information retrieval, multiple response, and simulators; television systems and equipment.

407-522 PROBLEMS IN AUDIO-VISUAL COMMUNICATIONS 2 Cr.
Prerequisite: 421-510. Approval of the major adviser.
Identification, selection, and completion of a problem in audio-visual communications, culminating in a Plan B paper.

407-532 PLANNING CLOSED CIRCUIT TELEVISION SYSTEMS 2 Cr.
Prerequisite: 407-360
Planning and administering closed-circuit television systems. Each student will determine the equipment, facilities, personnel, and budget required to meet the needs of a specific school or school system.

407-547 COMMUNICATIONS MEDIA DESIGN 2 Cr.
Prerequisite: 407-360
Identification of the communication problems through analysis of content, audience, and media. Selection, design and preparation of audio-visual materials.

407-551 PROGRAMMED INSTRUCTION 2 Cr.
Theory, principles, application, and evaluation of programmed instruction techniques. Survey of programmed instruction techniques. Survey of commercial programs, sources, and types of teaching machines. Practice in writing programmed instruction units.

407-559 SEMINAR IN EDUCATIONAL MEDIA RESEARCH 2 Cr.
Prerequisite: 407-360
Implications of significant educational media research and the implementation of research findings in teaching.

407-560 AUDIO-VISUAL ADMINISTRATION 2 Cr.
Prerequisite: 407-360
Seminar in administration and supervision of public school audio-visual programs. Group field projects supplement discussions of related literature.

421-401 INTRODUCTION TO GUIDANCE AND COUNSELING 2 Cr.
An overview of policies and practices of organized guidance programs for schools and colleges. Emphasis is given to the philosophy and evaluation of guidance, understanding the individual, counseling, and group guidance as it affects the classroom teacher and personnel worker.

421-405 HISTORY OF EDUCATION 2 Cr.
Elementary, secondary and higher education in the U.S. from the early colonial period to the present time.

421-429 GUIDANCE IN THE ELEMENTARY SCHOOL 2 Cr.
The nature and conditions of guidance in the elementary school. Curricular and non-curricular guidance techniques, referrals, and parent counseling. Recommended principles and practices in guidance applied to the elementary school child. (Quarter)

421-470 CONFERENCE LEADING 2 Cr.
Prerequisite: 449-304 or equivalent, and 442-304
Study of teaching. Study and practice of the principles and techniques of conference leading as an instructional device in vocational education.

421-479 PUBLIC RELATIONS 2 Cr.
Defines the public, objectives, and media of public relations in industry and education. Provides practice with such tools as new stories and features. Each student carries out an actual publicity program in the community.

421-481 AMERICAN HIGHER EDUCATION 2 Cr.
An introduction to the ramifications of the American system of higher education including history, philosophy, administration, curriculum, students, teachers, and demands for employment. Undergraduates by permission of the instructor only.

421-495 PERSONAL LEARNING EXPERIENCE 3 Cr.
Prerequisite: By permission
Each student selects the learning experience he wishes to pursue. May be individual or group experience. Group meets with sponsor from time to time when requested by the students. Self-evaluation paper by each student is the only requirement. Learning experiences, both individual and group, organized and directed entirely by the students.

421-500 PHILOSOPHY OF MODERN EDUCATION 2 Cr.
A comparative study of the main schools of educational philosophy and of their influence in contemporary education, thought, and practice, points of agreement and of conflict.

421-501 RESEARCH PROCEDURES 2 Cr.
Basic principles of educational research. A study of the selection of a problem, survey of the literature, type of educational research, planning the study, organization and interpretation of data, and preparation of the research report.

421-502 PRINCIPLES OF SUPERVISION 2 Cr.
Basic principles, types, functions, organizations, and plans of supervision. Interpretation and application of creative supervision plans; individual and class projects concerned with applied methods of supervision in selected educational areas.

421-505 SOCIAL THOUGHT OF AMERICAN EDUCATORS 2 Cr.
The school as a social institution within American democracy. Contributions of the past to education and current philosophies. Historical review, evaluation and consideration of the public school as a social institution.

421-510 APPLIED RESEARCH 2 Cr.
Prerequisite: 421-501
Applied research. Interpretation and application of research procedures, use of scientific methods for solving problems and orientation of student in terms of selected research problems.

421-511 INTRODUCTION TO STUDENT PERSONNEL SERVICES 2 Cr.
Critical examination of the history, philosophy and status of student personnel services in American colleges and universities. Particular attention is focused on student activities, residence programs, college counseling and advising, financial aids and records.

421-516 EDUCATIONAL EVALUATION 2 Cr.
Types of tests and test questions; the interpretation of test scores and grades by means of simple statistical procedures; methods of grading manipulative work and assigning final grades. (Quarter)

421-526 ADMINISTRATION 2 Cr.
Philosophy and principles underlying organization and operation of public education on the local, state, and national levels in the United States. Examinations of prevailing practices and current problems of school management.

421-527 SUPERVISION OF STUDENT TEACHERS 2 Cr.
Prerequisite: Teaching experience or consent of instructor
Purposes and philosophy of supervision, the role of the cadet center in preparing teachers, relationships, and responsibilities of persons involved, orientation, guidance, and evaluation of student teachers.

421-531 PROBLEMS IN GUIDANCE 2 Cr.
Prerequisites: Twelve hours of graduate credit in the counselor education sequence, including 421-501, 421-510, and 421-561, or the consent of the instructor. Approval of major adviser required prior to enrollment.

Plan B investigations are the primary purpose of this course. Students who are ready to write their Plan B paper should register for this course and then confer with the counselor education major adviser to select staff member who will serve as an investigation adviser. Meetings with the adviser are by arrangement only.

421-533 SURVEY PROCEDURES 2 Cr.
Prerequisite: 421-501
Procedures and organization for conducting surveys. Application of principles by making and writing the report of an actual survey.

421-538 ELEMENTARY SCHOOL CURRICULUM 2 Cr.
A study of the social, economic, and educational forces operating to bring about changes in the curriculum of the elementary school. Outstanding state and local curriculum construction programs. Observation and evaluation of the modern elementary school curriculum.

421-539 HIGH SCHOOL CURRICULUM 2 Cr.
A study of the social, economic and educational forces operating to bring about changes in the curriculum of the secondary school. Outstanding state and local curriculum construction programs. Observation and evaluation of the modern high school curriculum.

421-549 ORGANIZATION AND ADMINISTRATION OF STUDENT PERSONNEL SERVICES 2 Cr.
Prerequisites: 479-536 and 479-550
The study of the philosophical background the organization and administration of student personnel services in higher education settings. Visits to other campuses.

421-552 GROUP GUIDANCE PROCEDURES 2 Cr.
Prerequisites: 421-401 and 479-475
A study of group approaches for providing guidance services to pupils. Designed to help counselors and teacher-counselors understand how groups may be used as a setting for guidance and counseling.

421-561 EDUCATIONAL STATISTICS 2 Cr.
Methods of collecting, recording, evaluation, and interpreting data. Illustrative problems in education, business, and industry at the practical and research levels.

421-565 ORGANIZATION AND ADMINISTRATION OF GUIDANCE 2 Cr.
Prerequisite: 421-475
Duties of administrators, guidance directors, deans, teachers, parents, pupils and lay persons in guidance work. A study of types of organization methods of initiating programs and of in-service training.

421-570 THESIS PLAN A 6 Cr.
Prerequisite: 421-510. Approval of the major adviser.
Independent research on thesis under direction of investigation adviser. Selection of problems, development of outline, review of literature, compilation of bibliography, plan of method of attack, conduct of research, interpretation of findings, and preparation of the final paper according to thesis standards. Student may enroll for 2, 4, or 6 semester hours of credit for a final total of six.

442-508 CURRICULUM STUDIES IN HOME ECONOMICS 2 Cr.
Principles of curriculum construction. Review of recent literature on curriculum development. Evaluation of curriculum practice and techniques. Students may work on own curriculum problems.

442-512 HOME ECONOMICS FOR THE JUNIOR HIGH SCHOOL 3 Cr.
Principles of curriculum development for the home economics program in the junior high school. Emphasis on recent research, philosophy, and emerging practices in program patterns.

442-544 SEMINAR #1 NEW DEVELOPMENTS IN CURRICULUM CONSTRUCTION 2 Cr.
A study of new developments which relate home economics and education as they concern curriculum construction.

442-544 SEMINAR #2 NEW DEVELOPMENTS IN METHODS AND MATERIALS 2 Cr.
A study of new developments of methods and materials appropriate for home economics education.

442-544 SEMINAR #3 NEW DEVELOPMENTS IN DEPARTMENTAL PLANNING 2 Cr.
A study of the concepts of space and equipment and development of principles and guidelines of home economics departmental planning.

442-544 SEMINAR #4 COLLEGE TEACHING IN HOME ECONOMICS 2 Cr.
Educational techniques, methods and materials especially applicable to college teaching in home economics.

442-544 SEMINAR #5 INDIVIDUALIZED INSTRUCTION 2 Cr.
Study of the multi-role of the home economics teacher in the guidance of the home economics students in the classroom.

442-544 SEMINAR #6 CONTEMPORARY ISSUES IN HOME ECONOMICS EDUCATION 2 Cr.
Contemporary Issues in Home Economics Education.

442-575 PROBLEMS IN HOME ECONOMICS EDUCATION 2 Cr.

Prerequisite: 421-510. Approval of major adviser.
Identification, selection, and completion of a problem in Home Economics Education, culminating in a Plan B paper.

449-433 SHOP PLANNING AND EQUIPMENT SELECTION 2 Cr.

Prerequisite: 449-404 or equivalent
Principles of school shop planning including equipment selection and placement, plus selection, care, arrangement of supplies.

449-437 SCHOOL SHOP ORGANIZATION AND MANAGEMENT 2 Cr.

Prerequisites: 449-304 and 449-305
Experience in administration, project development and teaching problems associated with industrial education.

449-443 PROBLEMS IN TEACHING TRADE, TECHNICAL AND INDUSTRIAL SUBJECTS 2 Cr.

Prerequisite: 449-305 or equivalent
Individual work following approved practice in the development of instructional material for vocational-technical and adult teaching.

449-504 HISTORY OF INDUSTRIAL EDUCATION 2 Cr.
Evolution of modern industrial education through the people, movements, events and institutions that contributed to its formation.

449-535 PROBLEMS IN INDUSTRIAL EDUCATION 2 Cr.

Prerequisite: 421-510. Approval of major adviser.
Identification, selection, and the completion of a problem in Industrial Education, culminating in a Plan B paper.

449-546 SEMINARS IN INDUSTRIAL EDUCATION 2-6 Cr.
Special topics on current developments in the field. Each seminar devoted to a specific development to be indicated with a sub-title and description.

449-568 CURRICULUM PROCEDURES II (ANALYSIS TECHNIQUES FOR INSTRUCTOR) 2 Cr.
Not available to persons who have had 449-234 or 449-235. Study of analysis of occupations for instructional purposes and for personnel work. Jobs, operations, information topics, blocking, custom occupations, service occupations, checking levels, progression factors defines. Development of a complete analysis of an occupation for instructional use.

459-507 INTRODUCTION TO VOCATIONAL REHABILITATION 3 Cr.
History, philosophy, legislation, concepts and processes of vocational rehabilitation and vocational evaluation.

459-517 OCCUPATIONAL ANALYSIS AND INFORMATION 2 Cr.

Classification of occupations based on different criteria, methods of obtaining occupational information, methods of job analysis and establishment of worker requirements. Emphasis of courses on the needs, abilities and limitations of disabled persons.

459-521 MEDICAL ASPECTS OF DISABILITY 3 Cr.
Etiology, diagnosis, treatment, prognosis, and vocational implications of physical disabilities.

459-523 PROCEDURES OF VOCATIONAL EVALUATION 4 Cr.

Methods of evaluating disabled persons in a workshop setting.

459-526 PSYCHO-SOCIAL ASPECTS OF DISABILITY 3 Cr.
Psycho-social aspects of disabilities including motivational factors, attitudinal factors, self concepts, and psychodynamics of adjustment relating to traumatic and congenital handicaps.

459-538 PSYCHIATRIC & INTELLECTUAL ASPECTS OF DISABILITIES 3 Cr.
Etiology, diagnosis, treatment, prognosis and vocational implications of psychiatric disabilities, mental retardation, and brain damage.

459-553 PROCEDURES OF WORK ADJUSTMENT 4 Cr.
Methods of affecting adjustment in the work personality of the handicapped, concerning such factors as effective work habits, motivational habits, attitude, and responsibility. Methods of job training in rehabilitation facilities. Methods of effective workshop management. Field trips to rehabilitation facilities and industries.

459-557 MAN AND WORK 2 Cr.
A study of the world of work and the interacting factors between man and the demands of work with emphasis in assisting the student to identify the many variables that affect successful rehabilitation and placement.

459-583 VOCATIONAL EVALUATION FIELD PRACTICE 4 Cr.

Supervised ten-week field practice in the techniques of vocational evaluation and work adjustment procedures. To be completed at selected vocational rehabilitation facilities capable of offering the student an adequate field experience.

469-402 PRINCIPLES OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION 2 Cr.
Philosophy, organization and administration of vocational and adult education in the nation with special attention given to the Wisconsin program; federal and state laws affecting vocational education; coordination.

469-415 TECHNICAL EDUCATION PROGRAMS 2 Cr.
Prerequisites: Senior or Graduate Study
Philosophy, principles, operation, and structure of technical education programs at the post-high school level.

469-472 COORDINATION 2 Cr.
Principles of coordination in vocational and adult education, including apprenticeship training, business education, distributive education, home economics, trade and industrial education, and diversified occupations.

469-492 ADMINISTRATION OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION 2 Cr.
Vocational-technical and adult school operation, legal status, policy making, staff personnel, student personnel, programs, public relations, physical plant, business management.

469-509 PROBLEMS IN TEACHING VOCATIONAL AND ADULT EDUCATION 2 Cr.
Prerequisites: 449-402 and 449-404 and at least one year teaching vocational and/or adult education. Approval of the major adviser required prior to enrollment.
Analysis of problems confronting experienced teachers; development of tentative solutions; planning community programs.

469-536 PROBLEMS IN VOCATIONAL EDUCATION 2 Cr.
Prerequisite: 421-510
Identification, selection, and completion of a problem in Vocational Education, culminating in a Plan B paper.

469-558 SEMINARS IN VOCATIONAL EDUCATION 2-6 Cr.
Special topics on current developments in the field. Each seminar devoted to a specific development to be indicated with subtitle and description.

469-573 PROBLEMS IN COORDINATION 2 Cr.
Prerequisites: 449-472 and 421-402
Advanced study of principles and problems in vocational and technical school coordination through individual research.

479-350 ADOLESCENT PSYCHOLOGY 3 Cr.
Prerequisite: 479-123
The physical, emotional, social, moral, and intellectual development of secondary school youth.

479-352 CHILD PSYCHOLOGY 3 Cr.
Prerequisite: 479-123
Psychological development of children. Emphasis on age groups spanning the preschool and the pre-pubescent child; methods for scientific measurement and understanding of child behavior.

479-430 INDUSTRIAL PSYCHOLOGY 2 Cr.
Prerequisite: 479-123
Use of psychological methods in personnel management in industry. Emphasis is on personnel policy formation and techniques in placement, interviewing, efficiency, job evaluation and training, merit rating, morale, and safety.

479-431 ABNORMAL PSYCHOLOGY 3 Cr.
A study of more serious mental disturbances. Emphasis on the growing importance of mental disorders and on their early detection and referral.

479-432 PSYCHOLOGY OF THE EXCEPTIONAL CHILD 2 Cr.
Guidance of the learning and development of children who deviate from the normal, the mentally retarded, gifted, socially and emotionally disturbed, and those with visual, speech and orthopedic problems.

479-435 PERSONNEL MANAGEMENT 3 Cr.
Organization and coordination of personnel practices and methods. Consideration given to communication, employment, orientation and training, working conditions, supervision, performance evaluation, collective bargaining, salary administration, health and recreation.

479-455 HUMAN RELATIONS IN THE COMMUNITY 2 Cr.
Consideration of the social, psychological, medical, physical, spiritual and interpersonal aspects of growing into responsible adulthood. (Summer Session only)

479-475 COUNSELING THEORY 2 Cr.
Prerequisites: 421-401 or 421-429 or 212-324.
Psychological study of the interview. Consideration given to various interview objectives, points of reference, kinds of questions, and the improvement of techniques for various purposes of the teacher and counselor.

479-490 APTITUDE AND ACHIEVEMENT APPRAISAL 2 Cr.
Prerequisites: 421-401 or 421-429 or 212-324
Selection, interpretation, and use of tests and inventories for teachers and counselors. Study of achievement, aptitude, interest and personality tests with experience in the interpretation of results.

479-491 PSYCHOLOGY OF CAREERS 2 Cr.
Prerequisite: Graduate standing
Occupational and educational opportunities. Evaluation of information sources, occupational requirements, trends, and uses.

479-513 PERSONALITY 2 Cr.
The nature of personality and the conditions which make for its wholesome development, its maintenance and integration. Personality inventories used for self-analysis.

479-534 TECHNICAL-VOCATIONAL EDUCATION STUDENT 2 Cr.
Review of characteristics of vocational and technical students as it affects their social, physical, emotional and intellectual development in the transition from adolescence to young adulthood. Implications for guidance, counseling, and vocational education.

479-536 AMERICAN COLLEGE STUDENT 2 Cr.
Social, emotional, physical, and intellectual development in the transition from adolescence to young adulthood. Implications for student personnel services including guidance, counseling and college orientation.

479-541 INDIVIDUAL MENTAL TESTING 2 Cr.
Prerequisites: 479-490 and 479-565
Revised Stanford-Binet, Wechsler Adult Intelligence Scale for Children. Demonstration testing, group testing under supervision, and individual testing accompanies a study of the theory of mental testing.

479-543 ADVANCED INDIVIDUAL MENTAL TESTING 2 Cr.
Prerequisite: 479-541
Diagnostic and remedial approaches to learning difficulties in educational settings.

479-545 ASSESSMENT OF PERSONALITY (PROJECTIVES) 2 Cr.
History, theory and methodological consideration and studies of projective instruments. Instruction in administration, scoring and interpretation of some currently used devices leading to a knowledgeable understanding of the instruments.

479-548 DIAGNOSIS AND REMEDIATION OF LEARNING DIFFICULTIES 2 Cr.
Prerequisite: 479-541
Diagnostic and remedial approaches to learning difficulties in educational settings.

479-550 APPRAISING THE INDIVIDUAL 2 Cr.
Prerequisite: 421-425, 421-501
The case study approach to synthesis of test and non-test appraisal data.

479-555 ADVANCED PSYCHOLOGY OF LEARNING 2 Cr.
The nature, theories, principles, forms and conditions of learning. Acquisitions, retention, transfer, and related phenomena. Applications are made.

479-590 SUPERVISED CLINICAL PRACTICUM 4 Cr.
Prerequisites: 479-550 and consent of instructor
A minimum of 120 hours of closely supervised counseling experience through a series of interviews with selected counselees.

New Science and Technology Building

PART IV
PERSONNEL

STATE COORDINATING COUNCIL FOR HIGHER EDUCATION

(AS OF JULY, 1968)

Angus B. Rothwell, Executive Director ..... Madison
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William C. Kahl ..... Madison
Walter J. Kohler ..... Sheboygan
Harold A. Konnak ..... Racine
W. Roy Kopp ..... Platteville
William Kraus ..... Stevens Point
Philip E. Lerman ..... Milwaukee
Eugene W. Murphy ..... La Crosse
Joseph Noll ..... Kenosha
Maurice Pasch ..... Madison
Frank H. Ranney ..... Milwaukee
John D. Rice ..... Sparta
John Roche ..... Rio
C. O. Wanvig, Jr. ..... Milwaukee
Arthur E. Wegner ..... Madison

BOARD OF REGENTS WISCONSIN STATE UNIVERSITIES

(AS OF JULY, 1968)

Five Year Term Expires Feb. 1

Eugene W. Murphy, President, La Crosse 1973
W. Roy Kopp, Vice President, Platteville 1970
Stephen Ambrose, Whitewater 1972
David H. Bennett, Portage 1971
Norman L. Christianson, Roberts 1969
John J. Dixon, Appleton 1969
Allan L. Edgarton, Fond du Lac 1972
Milton Neshek, Elkhorn 1970
James A. Riley, Altoona 1973
James G. Solberg, Menomonie 1970
Siinto S. Wessman, Superior 1971
Mrs. Robert R. Williams, Stevens Point 1970
Eugene R. McPhee, Madison; Secretary and Director of Wisconsin State Universities
William C. Kahl, State Superintendent of Public Instruction (ex-officio)

ADMINISTRATION — STOUT STATE UNIVERSITY

William J. Micheels, Ph.D. ..... President
John A. Jarvis, Ph.D. ..... Vice President for Academic Affairs
Ralph G. Iverson, Ed.D. ..... Vice President for Student Services
John Furlong, Ph.D. ..... Vice President for University Relations & Development
E. J. Schoepp, A.B. ..... Vice President for Business Affairs
Dwight L. Agnew, Ph.D. ..... Dean, School of Liberal Studies
Herbert A. Anderson, Ed.D. ..... Dean, School of Applied Science & Technology
Erich R. Oetting, Ph.D. ..... Dean, School of Education
Wesley S. Sommers, Ph.D. ..... (Interim) Administrator, School of Home Economics
Robert S. Swanson, Ph.D. ..... Dean, Graduate College
Merle M. Price, M.A. ..... Dean of Men
Freda M. Wright, M.A. ..... Dean of Women
Helmuth Albrecht, B.S. ..... Director of Housing
Frank J. Belisle, M.A. ..... Director of Placement
Phyllis D. Bentley, M.S. ..... Librarian
Gerald Donley, M.S. ..... Coordinator of School Relations
Paul Goede ..... Food Service Director
Paul R. Hoffman, Ed.D. ..... Director of Counseling Center
Joseph M. Larkin, Ed.D. ..... Director of Financial Aids
Donald Osegard, B.A. (on leave 1968-69) ..... Director of Admissions, The Undergraduate College
Louis Rodey, M.S. ..... Superintendent of Buildings and Grounds
G. S. Wall, Ph.D. ..... Director of Admissions, Graduate College
Samuel Wood, M.A. ..... Registrar

THE GRADUATE COLLEGE FACULTY

Dwight L. Agnew (1947) Dean of the School of Liberal Studies, Professor
Park College, A.B.; University of Iowa, A.M.; Ph.D.

William D. Amthor (1960) Chairman of the Department of Industrial Graphics, Professor
Stout State University, B.S., M.S.; University of Minnesota, Texas Agricultural and Mechanical University, Ed.D.

Herbert A. Anderson (1948) Dean of the School of Applied Science and Technology, Professor
Stout State University, B.S.; University of Minnesota, M.A.; University of Missouri, Ed.D.

David P. Barnard (1947) Chairman of Department of Audio-Visual Education, Director of Audio-Visual Center, Professor
Stout State University, B.S., M.S.; Indiana University, Ed.D.

M. James Bensen (1966) Associate Professor, Industrial Education
Bemidji State College, B.S.; Stout State University, M.S.; Pennsylvania State University, Ed.D.

Phyllis D. Bentley (1954) Librarian, Associate Professor
University of Wisconsin, B.A.; Columbia University, M.S.

Dennis P. Bolstad (1961) Professor, Education and Psychology
St. Olaf College, B.A.; Macalester College, M.Ed.; University of Colorado, Ed.D.

Robert M. Cameron (1968) Associate Professor. Chairman of Distributive Education Department
Miami University, B.S.; Ohio State University, B.S.; New York University, M.S.; Indiana University, Ed.D.

E. Wayne Courtney (1962) Director of Research. Professor, Education & Psychology
Purdue University, B.S., M.S., Ph.D.

Lorraine C. Dahlke (1966) Professor, Director of Food Science & Nutrition Major
University of Wisconsin, B.A.; University of Minnesota, B.A.; State University, Iowa City, M.S.; Ohio State University, Ph.D.

James R. Daines (1963) Associate Professor, Power Technology
Stout State University, B.S., M.S.; University of Michigan, University of Houston, University of Missouri, Ed.D.

Ervin A. Dennis (1966) Associate Professor, Graphic Arts
Colorado State College, B.A., M.A.; Texas A & M, Ed.D.

John C. Deutscher (1966) Associate Professor, Education & Psychology
Wisconsin State University—Eau Claire, B.S.; Stout State University, M.S.; University of North Dakota, Ed.D.

Henry E. Draper (1968) Professor, Chairman of the Department of Child Development and Family Life
Brigham Young University, B.S.; Oregon State University, M.Ed., Ph.D.

Dorothy F. Dunn (1968) Professor, Chairman of the Department of Home Management, Economics and Equipment
University of Illinois, B.S.; University of North Carolina, M.S.P.H.; Purdue University, Ph.D.

John F. Entorf (1967) Associate Professor, Chairman of Department of Metals
Northern Montana College, B.S.; Texas A & M, M.E., Ed.D.

Wesley L. Face (1957) Assistant Dean, The Graduate College. Co-Director of American Industry Project. Professor
Northern State College—South Dakota, B.S.; Stout State University, M.S.; University of Illinois, Ed.D.

Eugene R. F. Flug (1962) Co-Director of American Industry Project, Associate Professor
University of Minnesota, B.B.A., B.S., M.A., Ph.D.

Orazio Fumagalli (1964) Chairman of Department of Art. Professor
State University of Iowa, B.A., M.F.A., Ph.D.

Earl W. Gierke (1962) Chairman of Department of Mathematics, Associate Professor
University of Minnesota, B.S., M.A., Graduate Study

Harold Halfin (1956) Associate Professor, Industrial Education. Director of Vocational Education Major
Fairmont State College, A.B.; Stout State University, M.S., University of West Virginia, Graduate Study

Robert R. Hardman (1964) Associate Professor. Director of Audio-Visual Communications Major
Maryland State College, B.S.; Indiana University, M.S., Graduate Study

Marybelle R. Hickner (1965) Assistant Professor, Home Economics Education
University of Minnesota, B.S., M.A., Ph.D.

Armand G. Hofer (1964) Professor, Wood Technics and Plastics
Northwest Missouri State College, B.S.; University of Missouri, M.Ed., Ed.D.

Paul R. Hoffman (1964) Professor. Director of Counseling Center, Director of Vocational Rehabilitation Major
University of Maine, B.A.; University of Iowa, University of Arizona, Ed.D.

Veryle E. Homuth (1966) Associate Professor, Education & Psychology
Valley City, North Dakota, B.S.; North Dakota University, M.S., Ed.D., University of Wisconsin, Post Doctoral Study

John M. Houle (1967) Assistant Professor, Education & Psychology
St. Louis University, B.S., Stout State University, M.S.; University of Wisconsin, Ph.D.

John A. Jarvis (1946) Vice President for Academic Affairs. Professor
University of Wisconsin, B.S. in Mechanical Engineering; Stout State University, B.S.; Wayne State University, M.Ed.; University of Minnesota, Ph.D.; Registered Professional Engineer

Ray C. Johnson (1938) Chairman of Department of Physical Education. Professor
Moorhead State College, B.E.; Columbia University, M.A., New York University, Graduate Study

Mercedes H. Kainski (1967) Professor, Food Science and Nutrition
University of Wisconsin, B.S., M.A., Ph.D.

Raymond L. Keil (1968) Professor. Chairman of Industrial Technology Department
Bradley University, B.S.; University of Arkansas, M.Ed.; Michigan State University, Ph.D.

Louis L. Klitzke (1960) Associate Professor, Education and Psychology
Southwestern College, A.B.; Colorado State College, M.A., Ed.D.

Joseph M. Larkin (1966) Associate Professor, Director of Financial Aid
Wisconsin State University—La Crosse, B.S.; Oklahoma State University, M.S., Ed.D.

David Wei-Ping Liu (1964) Chairman of Department of Social Science, Professor
National Chengchi University, B.S.; University of Kentucky, M.S.; University of Minnesota, Ph.D.

Anne Marshall (1939) Chairman of Department of Science, Professor, Biology
Denison University, B.S.; Ohio State University, M.A., Ph.D.

David A. McNaughton (1966) Associate Professor, Counseling Center
Stout State University, B.S.; University of Wyoming, M.Ed.; Ph.D.

Ella Jane Meiller (1950) Chairman of Department of Food Science and Nutrition. Professor
Kansas State University, B.S.; University of Wisconsin, M.S.; Kansas State University, University of Minnesota, Graduate Study

Paul F. Menges (1967) Chairman of the Department of Business Administration
George Washington University, B.A.; Columbia University, M.A.

Richard H. Miller (1964) Associate Professor, Mathematics
Moorehead State College, B.S., North Dakota State University, M.S., University of South Dakota, Ed.D.

Saadia S. Mohamed (1967) Associate Professor, Director of Clothing and Textiles Major
College of Home Economics, Cairo, Egypt, B.S.; Texas Woman's University, M.S., Ph.D.

Orville Nelson (1963) American Industry Project, Associate Professor
Stout State University, B.S.; University of Minnesota, M.A., Ph.D.

Erich Richard Oetting (1945) Dean, School of Education. Chairman of Department of Education and Psychology. Professor
Wayne State Teachers College, B.A.; University of Wisconsin, University of Nebraska, M.A., Ph.D.

Charlotte L. Orazem (1966) Assistant Professor, Chairman of the Department of Clothing and Textiles
University of Idaho, B.S.; Colorado State University, M.E., Colorado University, Western State College of Colorado, Southern Colorado State College, Graduate Study

Frank R. Pershern (1966) Associate Professor, Wood Technics and Plastics
State Teachers College, St. Cloud, Minnesota, B.S., Stout State University, M.S.; Texas A & M, Ed.D.

Arnold C. Piersall (1960) Professor. Chairman of the Department of Wood Technics and Plastics
Iowa State Teachers College, B.A.; Colorado State College, M.A.; University of Missouri, University of Wyoming, Colorado State College, Ed.D.

Cecelia Pudelkewicz (1967) Professor, Food Science & Nutrition
Villa Maria College, B.A.; Pennsylvania State University, M.A.; Iowa State University, Ph.D.

Henry J. Purchase (1968) Professor, Chairman of Department of Hotel and Restaurant Management
Cornell University, B.S.; University of New Hampshire, Graduate Study

Neal W. Prichard (1962) Professor, Industrial Education
University of Minnesota, B.S., M.A.; Pennsylvania State University, Ed.D.

Mary J. Rathke (1959) Associate Professor, Acting Chairman of Department of English
College of Saint Teresa, A.B.; University of Wisconsin, M.A., Graduate Study

Evelyn G. Rimel (1961) Professor, Education and Psychology
Montana State University, B.A., M.A., Syracuse University, Ph.D.; Merrill-Palmer Institute, Post-doctoral Study

Joe A. Rinck (1968) Assistant Professor, Power Technology
Kansas State College, A.B., M.A.; Colorado State College, Ed.D.

Michael D. Ritland (1964) Associate Professor, Education and Psychology
Luther College, B.A.; Colorado State College, M.A., Ed.D.

Jane Rosenthal (1962) Professor. Director of Home Economics Education Major
Stout State University, B.S., M.S.; Colorado State University, Ed.D.

E. Robert Rudiger (1952) Professor. Chairman of the Department of Industrial Education
Stout State University, B.S., M.S.; University of Missouri, Ed.D.

Philip W. Ruehl (1948) Assistant Dean, School of Applied Science & Technology. Professor, Electronics
Stout State University, B.S., M.S.; University of Minnesota, Ph.D.

James J. Runnalls (1966) Associate Professor, Wood Technics and Plastics
University of Wyoming, B.S.; Colorado State University, M.Ed.; University of Missouri, Ed.D.

Guy Salyer (1948) Professor, Education and Psychology
University of Missouri, A.B., A.M.; University of Nebraska, Ph.D.; Columbia University, University of Minnesota, Post Doctoral Study

Jack Sampson (1957) Chairman, Power Technology Department. Professor
University of North Dakota, B.S.; Stout State University, M.S.; University of North Dakota, Ed.D.

Lorry M. Sedgwick (1965) Professor, American Industry Project
Kansas State College, B.S.; Southern Illinois University, M.S.; Purdue University, Ph.D.

Lee Harold Smalley (1965) Associate Professor, Industrial Education
State College of Iowa, B.S.; University of Maryland, M.Ed.; Michigan State University, Ed.D.

Wesley S. Sommers (1965) Special Assistant to the President, Administrator, School of Home Economics. Professor
University of Michigan, B.S.E., A.M.; Syracuse University, University of Minnesota, Ph.D.

Robert Spinti (1957) Associate Professor, Chairman of Department of Electronics
Stout State University, B.S., M.S.; Pennsylvania State University, University of Missouri, Ed.D.

John B. Stevenson (1966) Professor, Education and Psychology. Director of Guidance Major.
Wittenberg University, B.S.; Hamma Divinity School, B.D.; Wittenberg University, M.Ed.; Ohio State University, Ph.D.

Robert Swanson (1950) Dean of The Graduate College. Professor
Stout State University, B.S., M.S.; University of Minnesota, Ph.D.

Charles L. Thomas (1966) Chairman of Department of Graphic Arts. Professor
Stout State University, B.S., M.S.; Colorado State College, Ed.D.

Thomas T. Tsuji (1967) Assistant Professor, Industrial Education
Stout State University, B.S., M.S.; Michigan State University, Ed.D.

Mildred Turney (1956) Professor. Chairman of Department of Home Economics Education
University of Connecticut, B.S., Pennsylvania State University, M.Ed., University of Illinois, Florida State University, Columbia University, Ed.D.

G. S. Wall (1952) Professor, Education and Psychology. Director of Graduate Admissions
Winona State College, Diploma, University of Minnesota, B.S., M.A., Ph.D.

Theodore E. Wiehe (1967) Professor, Industrial Education
Oklahoma State University, B.S., M.S.; University of Missouri, Ed.D.

Lawrence S. Wright (1967) Professor, Industrial Education. Director of Industrial Education Major.
Stout State University, B.S., M.S.; University of Missouri, Ed.D.

P. Robert Wurtz (1965) Assistant Professor, Education and Psychology
Rockhurst College, B.S.; University of Wyoming, M.A.; Kansas State University, University of Wyoming, Ph.D.

Norman C. Ziemann (1949) Chairman of Department of Speech. Professor
Wisconsin State University—La Crosse, B.S.; Northwestern University, M.S., Ph.D.

THE GRADUATE COLLEGE ASSOCIATE FACULTY

David A. Beveridge (1956) Instructor, Audio-Visual Education
Stout State University, B.S., M.S.

James Bjornerud (1964) Assistant Professor, Wood Technics and Plastics
Bemidji State College, B.S.; Ohio University, M.Ed.; University of Minnesota, Graduate Study

Todd A. Boppel (1963) Assistant Professor, Art
University of Wisconsin, Milwaukee, B.S., M.S.

Michael Bubel (1968) Associate Professor, Electronics
Pennsylvania State University, B.S., M.S.

Clara C. Carrison (1948) Associate Professor, Food Science and Nutrition
Western Illinois University, B.E.; University of Iowa, M.S.; Ohio State University, Pennsylvania State University, University of Tennessee, University of Minnesota, Iowa State University, Graduate Study

Darrel D. Coffey (1967) Assistant Professor, Vocational Rehabilitation
University of Iowa, B.A., M.A.

Douglas A. Cumming (1967) Instructor, Art
Drake University, B.F.A.; Indiana University, M.F.A.

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University of Nebraska, B.S.; University of Minnesota, M.A.; University of Omaha, Stout State University, Graduate Study

Kenneth J. Erickson (1961) Assistant Professor, Industrial Graphics
Wisconsin State University—Platteville, B.S.; University of Minnesota, M.A., Graduate Study

David A. Gamache (1967) Instructor, Art
Rhode Island School of Design, B.F.A.; Tulane University, M.F.A.

Clifford C. Gauthier (1963) Associate Professor, Mathematics
St. Cloud State College, B.S.; Bemidji State College, M.S.; Boston College, Graduate Study

Glenn Gehring (1965) Assistant Professor, Metals
South Dakota State University, B.S.; Stout State University, M.S.; University of Illinois, Graduate Study

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Bradley University, B.S.; Colorado State College, M.A., Graduate Study

Harry A. Herbert (1965) Assistant Professor, Audio-Visual Education
Bowling Green State University, B.S.; Stout State University, M.S.

Robert L. Hoyt (1967) Assistant Professor, Counseling Center
Northwestern University, B.S., M.A.

Gust Jenson III (1965) Assistant Professor, Education and Psychology
University of Missouri, B.S., M.A., Graduate Study

Michael J. Jerry (1962) Assistant Professor, Art
Rochester Institute of Technology, B.F.A., M.F.A.; Cranbrook Academy of Art, Graduate Study

Gordon G. Jones (1965) Instructor, Mathematics
North Dakota School of Forestry, North Dakota State University, B.S., M.Ed.

Dick G. Klatt (1952) Assistant Professor, Metals
Stout State University, B.S., M.S.

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Stout State University, B.S., M.S., Michigan State University, Graduate Study

Richard E. Longfellow (1966) Assistant Professor, Vocational Rehabilitation
West Virginia University, B.S., M.S.

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University of Omaha, B.F.A., University of Iowa, M.A., M.F.A.

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University of Wisconsin, B.A., M.S.

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Bemidji State College, B.S.; Wayne State University, M.Ed., Graduate Study

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St. Olaf College, B.S.; University of Minnesota, B.Arch., Registered Professional Engineer

Harry Olstad (1967) Assistant Professor, American Industry
Stout State University, B.S., M.S.

George S. Peltier (1966) Instructor, Metals
Central Michigan University, B.S., M.S.

John A. Perri (1966) Instructor, Art
Indiana State College, B.S.; State Teachers College, Indiana, Pennsylvania, M.E.; State University of New York, M.F.A.

Merle M. Price (1929) Dean of Men. Professor, Political Science
St. Cloud State College, Diploma; University of Minnesota, B.A., M.A., Graduate Study

Jeanne Salyer (1949) Instructor, Clothing and Textiles
Kent State University, B.S.; University of Wisconsin, M.S.

William Schulman (1966) Instructor, Art
University of Wisconsin, B.S., M.S.

August J. Schulz (1964) Assistant Professor, Driver-Safety Education
Stout State University, B.S.; New York University, M.A.; Graduate Study

Robert N. Schunk (1967) Assistant Professor, Associate Director Placement
Wisconsin State University—Stevens Point, B.S.; Northwestern University, M.A.; Boston University, University of Wisconsin, Graduate Study

George A. Soderberg (1945) Associate Professor, Wood Technics and Plastics
Stout State University, B.S.; University of Minnesota, M.A.

Lanore Sogard (1967) Assistant Professor, Child Development and Family Life
Iowa State University, B.S.; Kansas State University, M.S.

Paul Speidel (1964) Assistant Professor, Metals
Ellendale State College, B.S.; Colorado State University, M.E.; Northern State College, Graduate Study

Henry L. Thomas (1968) Associate Professor, Metals
Stout State University, B.S., M.S.; Colorado State College, Graduate Study

Louis Tokle (1965) Associate Professor, Economics
University of Montana, B.S.; University of Denver, M.B.A.; University of California, University of Montana, Graduate Study

John Van Osdale (1968) Associate Professor. Director of Extended Services
Ohio University, B.S.; Bradley University, M.S.; University of Nebraska, Graduate Study

Bruce Walley (1965) Assistant Professor, Industrial Education
University of Northern Illinois, B.S.; Stout State University, M.S.; University of Missouri, Graduate Study

Robert Wilson (1966) Assistant Professor, Art
Ohio State University, B.F.A., M.A., M.F.A.

Charles E. Wimmer (1966) Instructor, Art
University of Minnesota, B.A., M.F.A.

Richard Wold (1964) Instructor, Art
University of Minnesota—Duluth, B.A.; San Francisco State College, M.A., California School of Fine Arts, Graduate Study

Eddie F. H. Wong (1966) Instructor, Art
University of Washington, B.A.; University of New Mexico, M.F.A.

Michael Zingale (1967) Instructor, Art
University of Wisconsin, B.S.; Yale School of Art and Architecture, M.F.A.

THE GRADUATE COUNCIL

Robert S. Swanson, Chairman
Wesley L. Face, Vice Chairman
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Lorraine C. Dahlke
Robert R. Hardman
Saadia S. Mohamed
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L. S. Wright
G. S. Wall

COMMITTEES — GRADUATE MAJORS

AUDIO-VISUAL COMMUNICATIONS
Robert P. Hardman, Director
David P. Barnard
Patrick J. Haberman
John Deutscher

GUIDANCE
John Stevenson, Director
Evelyn Rimel
John Deutscher
Dennis Bolstad
David McNaughton

HOME ECONOMICS—CLOTHING AND TEXTILES
Saadia Mohamed, Director
Charlotte Orazem
Robert Wurtz
Marvin Kufahl

HOME ECONOMICS—FOOD SCIENCE & NUTRITION
Lorraine Dahlke, Director
Mercedes Kainski
Cecilia Pudelkewicz
Nelva Runnalls
Anne Marshall
Harry Herbert

HOME ECONOMICS EDUCATION
Jane Rosenthal, Director
Mildred Turney
Marybelle Hickner
Margaret Glennon
Guy Salyer

INDUSTRIAL EDUCATION
L. S. Wright, Director
Jack Sampson
Donald Clausen
Robert Rudiger
Lorry Sedgwick

VOCATIONAL EDUCATION
Harold Halfin, Director
John Houle
Thomas Tsuji
Orville Nelson
David Liu
Robert Rudiger
Philip Ruehl

VOCATIONAL REHABILITATION
Paul Hoffman, Director
Richard Longfellow
Ervin Dennis
Gust Jenson
David Beveridge

GRADUATE STUDENT SCHEDULE

What	Who	When
Application for Admission Form GC 111	All applicants—Degree Program and Special	At least 30 days prior to opening date
Official transcripts Undergraduate and Graduate, if any	All Degree Program applicants	Request of your registrar at time of application
Guest Matriculant Form GC 113 For transfer credits from Stout	Bonafide students in another graduate school	Request at time of application. Send to your registrar at once.
Registrar's Statement of degree granted Form GC 114	Special students Upgrading, Certification	Request at time of application. Send to your registrar at once.
Evaluation and notification of admission	All applicants	Follows receipt of credentials. Prior to enrollment
Registration	All students	First or second day of term (Pre-registration as announced.)
Degree Program Tentative, Final	All degree program students	First enrollment. Final, with application for degree
Degree Candidacy	All degree program students	After completion of candidacy block and at least 10 credits
Qualifying Examination	All degree program students	Near end of first term (as announced)
Plan A — Thesis Plan B — Investigation	All degree program students	Initiate in first term or after 12 credits. Due last week of term.
Intention to Complete Degree	All degree program students	During second week of last term.